

A USER'S GUIDE FOR THE BIBSORT PROGRAM FOR THE IBM-PC
PERSONAL COMPUTER(U) COLD REGIONS RESEARCH AND
ENGINEERING LAB HANOVER NH T KYRIAKAKIS ET AL. APR 85
CRREL-SR-85-4 F/G 9/2

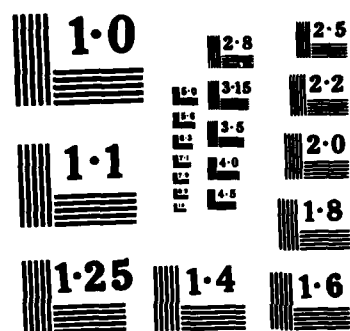
NL

UNCLASSIFIED

F/G 9/2

END

File # :



NATIONAL BUREAU OF STANDARDS
MICROCOPY RESOLUTION TEST CHART

2

Special Report 85-4

April 1985



**US Army Corps
of Engineers**

Cold Regions Research &
Engineering Laboratory

AD-A157 936

A user's guide for the BIBSORT program for the IBM-PC personal computer

T. Kyriakakis and I.K. Iskandar

DTIC FILE COPY

Prepared for
OFFICE OF THE CHIEF OF ENGINEERS

Approved for public release; distribution is unlimited.

85 8 6 062

Unclassified

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER Special Report 85-4	2. GOVT ACCESSION NO. AD-A157936	RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) A USER'S GUIDE FOR THE BIBSORT PROGRAM FOR THE IBM-PC PERSONAL COMPUTER		5. TYPE OF REPORT & PERIOD COVERED
7. AUTHOR(s) T. Kyriakakis and I.K. Iskandar		6. PERFORMING ORG. REPORT NUMBER
9. PERFORMING ORGANIZATION NAME AND ADDRESS U.S. Army Cold Regions Research and Engineering Laboratory Hanover, New Hampshire 03755-1290		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBER DA project 4A161102AT24 Task Area A, Work Unit 006
11. CONTROLLING OFFICE NAME AND ADDRESS Office of the Chief of Engineers Washington, D.C. 20314		12. REPORT DATE April 1985
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		13. NUMBER OF PAGES 63
		15. SECURITY CLASS. (of this report) Unclassified
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution is unlimited.		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) Bibliography Computers Computer applications IBM-PC Computer programming Literature cited Computer programs References		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This report is intended to provide the reader with step-by-step instructions on how to use the BIBSORT computer program on the IBM Personal Computer. The program allows storage and retrieval of bibliographic data. The program has been tested on an IBM-XT, using DOS 1.1 or 2.1. The program requires a monitor and a printer. This user's guide discusses how to prepare diskettes to enter the data, how to name categories and files, how to open categories and files, and how to enter data. The guide also shows how to sort and store data, edit, de-		

DD FORM 1473

EDITION OF 1 NOV 65 IS OBSOLETE

Unclassified

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

Unclassified

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

20. Abstract (cont'd).

lete, or append the data, and how to obtain a hard copy of the sorted data. Each data diskette can take up to 500 entries, assuming 512 characters per entry. A section on how to change the program to fit specific needs is presented in Appendix A, and the program listing is in Appendix B.

A-1

PREFACE

This report was prepared by T. Kyriakakis, Computer Science Technician, Engineering and Measurement Services Branch, Technical Services Division, and Dr. I.K. Iskandar, Research Chemist, Earth Sciences Branch, Research Division, U.S. Army Cold Regions Research and Engineering Laboratory. The study was funded under DA Project 4A161102AT24, Research in Snow, Ice and Frozen Ground, Task Area A, Properties of Cold Regions Materials, Work Unit 006, Chemistry of Freezing and Frozen Soils.

The report was technically reviewed by Francis Sayles and Charles McKenna of CRREL. The authors acknowledge the excellent technical editing provided by Maria Bergstad, Technical Information Branch, Technical Services Division, CRREL.

The contents of this report are not to be used for advertising or promotional purposes. Citation of brand names does not constitute an official endorsement or approval of the use of such commercial product.

CONTENTS

	<u>Page</u>
Abstract	1
Preface	111
1. Introduction	1
1.1 General	1
1.2 Before you start	2
1.3 Backup copy	2
1.4 Program capability and structure	3
1.4.1 Categories	3
1.4.2 Files	3
1.4.3 Entries	4
2. Starting Up (Main Menu)	5
2.1 Create/edit/add categories	5
2.2 Create/append file	6
2.2.1 Name File	6
2.2.2 Entries	6
2.3 Edit BIBSORT	7
2.3.1 Source file	7
2.3.2 Sort	8
2.3.3 Select	9
2.3.4 Save	10
2.3.5 Exit	11
2.3.6 Delete	12
2.3.7 Original	12
2.3.8 Source (working list)	13
2.3.9 View/edit	13
3. Formatted Printing of Bibliography	19
3.1 Setting up the printer	20
3.2 Review of printing run	21
3.3 Author index	24
4. Utilities	25
4.1 Delete category file	25
4.2 Delete data file	25
4.3 Rename data file	26
4.4 Directory of data files	27
4.5 Exit utilities	27
5. Program Errors	28
Appendix A: Program Changes	31
Appendix B: Program Listing	43

A USER'S GUIDE FOR THE BIBSORT PROGRAM FOR THE IBM-PC PERSONAL COMPUTER

T. Kyriakakis and I.K. Iskandar

1. INTRODUCTION

1.1 GENERAL

Almost any technical article must contain a list of the literature cited, often called a bibliography. The magnitude of the task of typing and arranging the bibliography depends on the number of entries it contains. It may be simple if there are a few entries, but it can be a major task when a large number of references is included. Moreover, adding later references during the review or editing process necessitates retyping and further proofreading. The process of typing references and retyping and reproofreading is repeated for each article written. Recent advances in word processing simplified this task, but the current progress in personal computers has made it even easier.

This report is a user's guide to BIBSORT, a computer program that enables the IBM Personal Computer to store and retrieve bibliographic information. The program can be modified for specific options and it can be adapted to other personal computers. The program was written to be user-friendly. No previous experience with computers is required to use BIBSORT.

To conform to the style of the IBM Personal Computer manuals, this user's guide shows all user input in uppercase letters. You can, however, enter lowercase letters or a mix of upper- and lowercase. The IBM Personal Computer accepts both.

As you proceed, you will note that the screen prompts will instruct you to "hit RETURN" to confirm input. The appropriate response, as noted

throughout the text, is to press the Enter key (↵) on the keyboard of your IBM Personal Computer.

1.2 BEFORE YOU START

The BIBSORT programs are contained on two diskettes. The first is the Bibliography Program diskette and the second is the Utility diskette. The Program diskette contains the main programs; it must be kept in drive A at all times (unless the system tells you to do otherwise). The Utility diskette is only used when you want to save data from one diskette and transfer it to another one. The Utility diskette is also placed in drive A when you want to use it. In addition to those two diskettes, you need a data diskette to store your bibliography references. You can have as many data diskettes as you want.

To format a data diskette, use the DOS 1.1 (or any updated version) FORMAT command:

FORMAT B: (don't use the /s option).

1.3 BACKUP COPY

It is always a good idea to keep a copy of your BIBSORT program, in case the original is damaged or a power failure occurs while you are using it. In addition, from time to time, copy your data diskette(s). Store the originals away from the copies in a safe place (another cabinet).

To make a copy of the program or the data diskette(s), place a formatted diskette in drive B and the diskette containing the DOS (Disk Operating System) program in drive A. Type

DISKCOPY A: B:

and press Enter.

Remove the DOS diskette from drive A and place the source diskette that you want to copy in drive A. Press any key.

After copying is completed, you will be asked if you want to copy more diskettes. If you do, answer Y; otherwise, answer N.

After copying, verify that the data was correctly copied by removing the source diskette from drive A and placing the DOS diskette in drive A. Type

DISKCOMP A: B:

and press Enter.

Remove the DOS diskette and place the Program diskette or the data diskette (source diskette) in drive A and press any key. If the comparison is good, remove the copy diskette from drive B, label it, and store it in a safe place (another cabinet). If the comparison is not good, perform the copy procedure again.

1.4 PROGRAM CAPABILITY AND STRUCTURE

1.4.1 Categories

Before entering any bibliographic entries (references), you must choose a category name(s) for your bibliography. BIBSORT allows you up to six categories. For example, you can store your entries under 1) books, 2) journal articles, 3) technical report, 4) unpublished reports, 5) presentations, and 6) theses and dissertations. Or you may not be interested in the type of publication, but rather in the subject of the publication. In this case, you may choose 1) GF - physics (for ground freezing - physics), 2) GF - chemistry, 3) GF - frost heave, 4) GF - prediction, and so on.

As stated, you can specify from one to six categories. If you need more than six, you must change the program to accommodate your needs (see Appendix A, Program Changes).

1.4.2 Files

In addition to the categories capability, you can enter the bibliographic entries under file(s). Each file can contain up to 500 entries per diskette. You can have as many files as you wish on the same data diskettes. You can also have as many files as you wish.

NOTE

It is strongly recommended that you keep only 20-25 entries in each file to save time later on when you want to edit, arrange, or retrieve them.

Naming a file follows the restrictions given in the DOS manual. The name cannot be longer than 9 characters and cannot include a period (.). In addition, you should not use the names DONE or DISK because they are reserved in the program as special commands. In naming files you may want to use two or three letters indicative of the subject of the entries plus numbers for further classifications. For example, if you want to open files for soil chemistry, you might choose SC1, SC2, etc., or SCHg, SCZn, etc.

(to indicate that the entries in the file deal with soil chemistry - mercury, soil chemistry - zinc, etc.). There are many ways to name your files and to classify your entries according to file names. It is best if you experiment with the program and spend some time planning your categories and file names. You can always add, edit (change names), and delete files. The program also allows you to work with one, several, or all the files at one time (see Edit BIBSORT, section 2.3).

Pressing F1 and then pressing Enter in response to a file name requested by the system brings to the screen a menu of the data files on the diskette that is currently in drive B. The BST extension on each of the file names is a system convention.

1.4.3 Entries

Each bibliography reference is called an entry. Each entry consists of the author(s), year of publication, title, source (where it was published), and, if desired, an abstract. Each entry is allowed 512 characters, which allows 500 entries per file or per disk. You can increase the number of characters for each entry (see Appendix A, Program Changes), but this will increase the time needed to read the file.

When you make an entry, you have the option of typing in a code number associated with it. Knowing the code number will expedite calling this entry in future editing. The code numbers are not printed out on hard copies, so you will have to keep track of them manually. This coding option provides one more capability for sorting and retrieving entries.

2. STARTING UP

To start up, place the Bibliography Program diskette in drive A and the data diskette in drive B. If the computer is off, turn it on. If the computer is on, press the Delete key while holding the Control and Alternate keys down (booting). The first thing to appear on the screen is the Main Menu:

MAIN MENU

OPTIONS: 1 -> Create/Edit/Add CATEGORIES
2 -> Create/Append to FILE
3 -> Edit BIBSORT
4 -> Print
5 -> HELP
6 -> Utilities
7 -> EXIT

OPTION:

2.1 CREATE/EDIT/ADD CATEGORIES

When a new data diskette is used (placed in drive B), Create/Edit/Add CATEGORIES should be the first option you select. The program will prompt you to create categories. As mentioned earlier, you may have up to six categories in the category directory. If you enter less than six, the program will ask for more names; at this point enter DONE. Each category name can be up to 45 characters.

After that, you will be asked if you want to add categories. This only happens if there are less than six categories in the directory. If your answer is Y, you can then add on the new category. You can exit from appending the category directory by typing DONE.

The next prompt is "Do you want to edit categories (enter Y or N)." Answer N for no; any other answer will mean yes. When you complete editing, enter 0 (zero) and press Enter. The Main Menu will return to the screen.

There is no way to delete a category name. However, you can overwrite a category name with another category name by editing the category file and selecting the number of the entry you want to overwrite. If you do not want to overwrite a category name, you can effectively delete the category name by not using its entry number in the bibliography data files on that disk or on related data disks.

You can delete an entire category file. To do so, enter option 6 from the Main Menu and then select option 1 from the Utilities menu. You will be asked, for safety purposes, whether you are sure you want to delete the category file. You must answer either Y or N. The file is deleted if you answer yes. For more information, see Chapter 4, Utilities.

In routine use of BIBSORT you don't have to select option 1 again unless you want to edit or add to the categories or you want to use a new data diskette.

2.2 CREATE/APPEND FILE

2.2.1 Name File

When you select option 2 on the Main Menu, you will be prompted to insert the data diskette in drive B and press Enter. The categories will appear on the screen with their associated numbers as a reminder that you may include the associated category number(s) with your entries.

You will be prompted for the file name. Enter a legal file name, as described in section 1.4.2 above. If this is the first time you have entered this file name and it is a legal name, a new file is opened.

If the file name is illegal, the system will again ask for a file name. If you don't want to continue, press Enter and the Main Menu will reappear on the screen.

If the file name you entered already exists, the system will ask if you want to append entries to this file.

2.2.2 Entries

Once you have opened a new file or appended an existing one, the screen will either show that you are "entering entries for file" or "appending entries to file" and will start asking for input. The following is the order of input information for each entry:

- (a) An entry number, automatically assigned by the system, is shown.
- (b) Category number: Indicate whether you want the entry to be assigned to this category. At this point you may enter 0 to quit and return to the Main Menu. If the number you enter is larger or smaller than what the Category Directory contains, the system will indicate this and display the Category Directory and its associated numbers. Press Enter to go back to where you were; you will then be asked to enter a valid category number.

- (c) Enter the year that the document was published. You can type four numbers or you can type only two numbers. In the latter case, the system assumes that the year is 19xx.
- (d) The system will request a code for the entry. The code is an additional number that you may want to assign to each entry. It gives you an extra key for grouping entries and may be utilized later on for sorting and selecting entries. You may choose not to enter a code; in this case, press Enter. Codes are not printed on hard copies.
- (e) Authors: Enter the last name of the first author, press Enter, and then enter the first author's initials without any periods or commas. You can enter one or two letters. Press Enter.
Enter the last name of the second author, press Enter, enter the initials of the second author, and press Enter.
Repeat these steps until all the authors have been entered.
Then, when the system asks for a last name, press Enter. The maximum space available for authors is 75 characters.
- (f) Title: Enter the title of the article as you want it to appear on your hard copy. The title should be less than 160 characters.
- (g) Source: Enter the source exactly as you want it to appear on the hard copy. The space available is 110 characters.
- (h) Abstract: The space available is 158 characters. When you have completed the abstract, press Enter. If you don't want to include an abstract, just press Enter.
- (i) The system will prompt for the next entry.

NOTE

If you want to change the allowable number of characters for any or all of the above you must change the program (see Appendix A).

2.3 EDIT BIBSORT

Edit BIBSORT, option 3 on the Main Menu, allows you to edit, sort, select, and delete entries and save the revised version.

2.3.1 Source Files

You must know the file name(s) of the entries. If all the entries are in one file, enter that name; if you wish to work with entries from more

than one file, enter all the file names. Then type DONE and press Enter. If you wish to work with entries from more than one diskette, type the word DISK and continue entering file names.

Two identical copies of the requested files are stored in the computer memory (RAM). One copy is called the source (or working) copy and the other is called the original. The original copy stays in the memory and you can call it to replace the source copy if a mistake is made while working with the source copy.

The system takes 2 to 5 seconds to read each entry. When all entries are copied in the memory, the total number of working entries in the requested files is displayed on the screen. The BIBSORT menu is also displayed:

BIBSORT Menu

OPTIONS:

- 1 -> SORT
- 2 -> SELECT
- 3 -> SAVE
- 4 -> EXIT
- 5 -> DELETE
- 6 -> ORIGINAL
- 7 -> SOURCE
- 8 -> VIEW-EDIT

CHOICE

Each option on the BIBSORT menu is discussed below.

2.3.2 Sort

If you select option 1 on the BIBSORT menu, the Sort Options menu will be displayed on the screen as follows:

OPT	PRIMARY KEY	SECONDARY KEY
-----	-------------	---------------

Sorting keys:

1 ->	category	author
2 ->	year	author
3 ->	code	author
4 ->	title	author
5 ->	author	year

Which key to sort

Input the number corresponding to the primary key that you want to use for sorting. The system indicates an error for any input other than a number from 1 to 5. When the sort is completed, the working list is ordered according to the primary sort key you specified, and the system returns to the BIBSORT menu. Any entries that have the same primary key will be sorted according to the secondary key for the specified primary key (see above). For example, if sort option 5 is selected and two entries have the same author, then the entries will be ordered according to year (the secondary key for option 5). If both the primary and secondary keys are the same for two entries, the sort leaves them in the same relative order as they were entered (sort is a stable sort). An entry with an empty sort key field will be placed at the end of the working list.

A category sort (sort option 1) is based on the category reference numbers of the entries in the working list and not the category name. For example, if the category reference number is 1 for entry C and 2 for entry D, but the category name associated with category reference 1 is FLOODS and that associated with 2 is DRAINS, entry C will come before entry D even though DRAINS comes before FLOODS alphabetically.

The order of all sorts is based on ASCII codes (see the DOS manual). A character with a lesser ASCII code comes before a character with a greater ASCII code. In most cases the user does not have to be concerned with this since an ASCII sort usually acts like a normal sort. Letters in the same case (e.g., lowercase) are sorted in normal alphabetical order, and digits are sorted in ascending order (0-9). The ASCII codes for digits precede those for punctuation marks (3 comes before ?), most punctuation marks precede the codes for uppercase letters (? comes before B), and the ASCII codes for uppercase letters precede the codes for lowercase letters (Z comes before b).

2.3.3 Select

Option 2 on the BIBSORT menu allows you to select entries by one of the following options:

Valid Selections:

A=<AUTHOR>
T=<TITLE>
C=<CATEGORY>
S=<CODE>
Y=<YEAR>
E (to exit)

To select entries authored by Smith, type

A=SMITH

then press Enter.

All articles authored by Smith will be selected. For a category select you must enter the category name, not the number. Use the first few letters of this category; it is not necessary to type the entire name. You can directly list available category names by selecting option 8 (View-Edit) on the BIBSORT menu.

If you associated a code with the entry when you first input the bibliography reference, you can use the code as an option for select. The year select (option Y= in the select menu) can be used in three ways:

- (a) You can type Y=xx (where xx is the last two numbers of the year you want).
- (b) You can type Y>xx, or
- (c) You can type Y<xx.

2.3.4 Save

Option 3 on the BIBSORT menu allows you to save a copy of the entries in the working list in their present order onto a data file on a diskette. You can either create a new data file, or you can append it to an existing one (that was not a source file). If you did not alter the working copy while you were sorting and selecting, the system indicates that nothing has been done with the entries and asks whether you still want to copy the working list to a file. Answer Y for yes; any other reply will be taken as no and the BIBSORT menu will return to the screen.

If the answer is Y, the system's response depends on whether you created the working copy of entries from one or more than one diskette.

2.3.4.1 Working from One Diskette

If you transferred entries to the computer memory from only one diskette, the following questions will appear on the screen:

- (a) Do you want to put the OUTPUT file on a disk other than the one currently in DRIVE B? If the answer is no, the system proceeds with (b). If the answer is yes, the system goes to the sequence described in section 2.3.4.2.

- (b) The system asks for a file name. Provide a valid file name, or press Enter to abort this option.
- (c) The system checks to see if that name is on the data diskette. If it is not, the system creates a new file, saves the entries from the working list, and proceeds with (d). If the file name is already on the data diskette, the system will ask "Erase file?" i.e., do you want to save these entries on top of the old ones. If you don't, the system will then ask if you want to append the new (working) entries to the existing data file. If you enter Y, the system will save the entries after the last entry of the specified file. If you enter N, the system will return to (b) above.
- (d) The system indicates the numbers of entries written to the data file and the name of the file, and returns to the BIBSORT menu.

2.3.4.2 Working from Multiple Diskettes

If you used entries from more than one data diskette, the system will ask you to insert the Utility diskette in drive A. To return to BIBSORT at this point, enter ABORT.

- (a) Insert the Utility diskette in drive A and press Enter. The working list is copied temporarily onto the Utility diskette as an output file. Whenever the system can't find an entry in the working file on the data diskette, it will ask you to place the proper data diskette in drive B and press Enter.
- (b) You will then be asked for a file name. As in (c) above, once you enter a file name, the system decides whether to create a file, overwrite an old one, or append an existing one.
- (c) After the temporary output file is saved on the data diskette, the system asks you to insert the Program diskette in drive A and press Enter. At that point the name of the data file and the number of entries written will be displayed, and you will be returned to the BIBSORT menu.

2.3.5 Exit

Option 4 on the BIBSORT menu returns you to the Main Menu. If you did not save your work when working with option 3 of BIBSORT, you will be reminded that you did not do so and asked if you still want to exit BIBSORT.

Another way to exit BIBSORT is to type DONE when you are asked to enter the file name.

2.3.6 Delete

Option 5 on the BIBSORT menu lets you delete specific entries from the working list. Delete, however, only works with the author field, so you can delete entries only by specifying all or part of the name of the author whose entries you want to delete.

When option 5 is selected, the system asks you to enter the name of the author whose entries are to be deleted. Enter either the entire name (last name followed by first and middle initials) or part of the name (i.e., just the last name or the first three letters of the last name). Do not make the search string too general, to avoid deleting entries that you do not want deleted. The longer the search string, the more specific the search and delete will be. After the delete has been completed, the system indicates the number of entries found and deleted that corresponded to the search string and the number of entries remaining in the working list, and then returns to the BIBSORT menu.

If you made a mistake and deleted entries that you wanted to keep, you can go back to the original entries (option 6 on the BIBSORT menu).

2.3.7 Original

Option 6 on the BIBSORT menu lets you change the working list back to the original entries. This may be useful if you make a mistake while altering the working list with a select or delete operation. When you choose option 6, the system copies the original entries back into the working list, indicates that you are now working on the original entries, and then gives the number of entries in the working list.

When the working source files are first read, each entry is put into two lists, the working list and the list of original entries. Therefore, the system need only read the list from its own memory (which is not changed by any of the sort, select, or delete operations) into the working list. This saves the system and you a lot of time.

Note that this option does not return the working list to its state just before an operation.

2.3.8 Source (Working List)

Option 7 on the BIBSORT menu lets you work with another group of source files. When this option is chosen, the system prompts you to enter the source file names (see section 2.3.1, Source File, for more information on entering file names). As mentioned in Source File, if you enter DONE in response to the first source file prompt, the system will exit BIBSORT. Once you enter the source files correctly, the system reads the entries from these sources files into the list of original entries and the working list. If no entries are read, the system indicates this and continues prompting for source files. If entries are read, the system indicates the number of entries in the working list and then returns to the BIBSORT menu.

Thus this option changes the working source files and the original entries as well as the working list. If option 6 is chosen after this option, the working list is changed to the new list of original entries and not the first list of original entries.

NOTE

This option does not change the working category directory, so the category name list remains the same. Return to the Main Menu and choose option 3 (Edit BIBSORT) to change the working category directory.

2.3.9 View-Edit

Option 8 on the BIBSORT menu allows you to view and/or edit entries in the source files. You have three viewing points to choose from within View-Edit.

View-Edit Menu

Would you like to view:

- 1 -> All entries in CURRENT working list
- 2 -> A particular entry or group of entries from CURRENT working list
- 3 -> All entries from one of the source files (original entries)
- 4 -> None (return)

Option 1 is the general-purpose view/edit option, it lets you edit and view any of the entries in the current working list. However, you may have difficulty locating and determining the entry number of the entry or en-

tries you want to edit. Changes to entries using option 1 are saved both on diskette and in the working copy of the entry. Option 1 is usually used when you are viewing the current working list and notice an error in one of the entries.

Option 2 of the View-Edit menu allows you to narrow down the current working list, to save time searching for the reference number(s) of the entry or entries you want to edit. It is equivalent to performing a select (option 2 on the BIBSORT menu) before choosing the view/edit option of BIBSORT and then choosing view/edit option 1. Remember that this option changes the current working list, just as Select does. Editing with this option saves changes for an entry both on diskette and in the working list. Option 2 of the View-Edit menu is usually used when a group of entries that needs to be edited can be identified with a common key.

If you want to edit an entry or group of entries from one file and then exit and return to the Main Menu, the quickest way is with option 3. This is also the quickest of the three view/edit options in terms of saving the changes, but it does not change the information on the BIBSORT working list, so do not plan to work further with the working list after using option 3. Option 3 is also independent of the current working list; therefore you can edit any entry in one of the working source files, whether or not it is in the working list. Option 3 should only be used when you plan to leave BIBSORT afterwards.

Each view/edit option prints entries on the screen in pairs (except for the last if there is an odd number of entries). Each entry is numbered and is listed by fields (category, year, author, etc.) with the field name preceding the field data. A blank field is indicated by a triangle (Δ). If the system cannot find the file on the data diskette in drive B, it prompts you to insert the data diskette that contains that file. After each pair of entries is displayed, the system gives you four options:

ENTER

RETURN to continue
#E to edit entry

to review from specific entry
S to stop

To continue viewing, press the Enter key. To skip forward or go back to a specific entry, give the reference number of the entry you want to go to. To return to the BIBSORT menu, enter S (for stop). The system also returns to the BIBSORT menu if you press Enter and there are no more en-

tries to view. To edit an entry, enter its reference number followed by an E. If you don't enter one of the above options or if you enter a reference number outside the entry list range, the system indicates an error with a beep and again prompts for an option from this menu.

2.3.9.1 Editing Entries

If you choose to edit an entry, enter the reference number followed by E. The system displays just the specified entry on the screen followed by the Edit Options menu:

Edit Options Menu

Which field to edit: 0 -> Quit WITHOUT Saving Changes
1 -> Category
2 -> Year
3 -> Code
4 -> Author
5 -> Title
6 -> Source
7 -> Abstract
8 -> STOP and SAVE Changes

Each of the edit options except 0 and 8 lets you edit one of the fields of the entry. Option 0 tells the system to quit editing the entry without saving the changes. Option 8 tells the system to save the changes to the entry; the system changes the data for that entry in the file on the appropriate diskette. If the file does not exist on the data diskette in drive B, the system prompts you to insert the correct data diskette. The system will also change the information for the entry in its working list unless option 3 from the Edit Option menu was chosen.

To change a field of an entry, enter the edit option number that corresponds to that field. The cursor will move to the start of that field on the screen. You can then change the data for the field of the entry. The Cursor Left and Right keys, the Insert key, and the End key can be helpful in editing a field. When editing of a field is completed, press the Enter key.

The system accepts as input everything between the start of the field and the cursor (see Hints on View/Edit below). If the wrong edit option number was entered and you wish to return to the edit options without changing the field, enter XX at the start of the field; the system will

reprint that field and return to the edit options. To delete a field and leave it blank, press Enter after the cursor moves to that field.

The above two procedures will not work when the selected field spans more than one line on the screen. In this case, to leave a field the same, press the End key; to leave a field blank, press the End key and then use the Backspace (+) key until the field is erased. The system will only check the changes for fields 1 (category), 2 (year), and 3 (code). If the change for one of these fields is bad, the system indicates an error and requests that you re-enter the change. The system however does not check the changes for the other fields, so you can change the standard system for the author field.

When you are through editing an entry, exit the edit options by choosing 0 or 8. The system returns to viewing entries, starting at the entry just edited. You may then continue viewing and editing entries, or you can return to the BIBSORT menu (see above under Viewing Options). Once back to the BIBSORT menu, you can work on the working list of entries with the other BIBSORT options or return to the Main Menu by selecting option 4 of the BIBSORT menu.

2.3.9.2 Hints on View-Edit and Entering Data

When entering or appending entries, input all entries before going back to edit. Mistakes made in entering a field of an entry can be corrected during entry only if you are still in that field. Once a new field is started, you can't go back and correct a previous field. You must exit the entry-entering part of the system (Main Menu option 2, Create/Append to File) and enter the editing part of the system (Main Menu option 3, Edit BIBSORT) to correct the mistake. This can be a time-consuming process, since the system must load the BIBSORT program and then load into memory all the entries of the data file with the mistake (each entry takes about 2-5 seconds to load). Instead of doing this after each mistake, make a note of the error and the entry with the error for each mistake and, when done with creating the data file, go back and edit all the mistakes at one time.

Each data file may contain up to 500 entries, which is equivalent to 256,000 characters or bytes. A data diskette (double sides/double density) holds a little over 300,000 characters or bytes. Therefore, a data file

with close to 500 entries will take up most of the data diskette space and few, if any, other data files will be able to fit on a data diskette.

Try to keep the data files relatively small (about 20-30 entries each). As mentioned above, loading entries into memory for BIBSORT is very time-consuming, and BIBSORT must be used to edit entries. To make one change in a data file with 75 entries takes over 5 minutes because of this loading time. However, to make a change to a data file with 20 entries takes a little over 1 minute. Using small rather than large-sized data files can save you a lot of time since you may frequently have to make minor changes to an entry or two. All other functions, such as sorting and selecting, can still be performed on a large group of entries in several data files just as if they were all in one large data file by using multiple source files with BIBSORT (see section 2.3.1). The only disadvantage may be in keeping track of what entry is in which data file, but this is a problem of user organization. Plan how you are going to arrange and group your entries before creating the data files. The code filed for each entry may be useful in grouping entries.

If you enter more characters for an entry field than are allowed (see section 2.2.3), the system does not indicate an error. Instead, it does not accept the data entered beyond the field size limit, so that later, when you view the entry on the screen or print it out, the field may appear to be cut off. A way to get around field size limits is to extend lengthy data that belongs to one field to the start of the following field (if it has enough room), or to start the lengthy data of a field at the end of the previous field. The fields should, of course, be adjacent. You will find that this technique can only be effectively utilized for the title and source fields because of the way entries are formatted with option 4 of the Main Menu. Choose the end of a field, knowing that a period and two spaces follow the title field and the source field. If field size is a consistent and troublesome problem, you can alter the field sizes set by the system (see Appendix A, Program Changes).

While in view/edit or edit mode in BIBSORT or while entering or appending entries in option 2 of the Main Menu, be careful which keys you press. Avoid the Cursor Up and Down keys, the Home key, the Escape key, and the Delete and Backspace keys. Pressing any one of these may erase the screen and/or cause a problem with entering an option. If you should

mistakenly press one of these keys, try to continue and hope that the screen will be printed again. If that does not work, try to exit that part of the system and then re-enter it. (The Cursor Up and Down keys may be used when editing a multiple-line field.)

3. FORMATTED PRINTING OF BIBLIOGRAPHY

Option 4 of the Main Menu allows you to print one or more Bibliography Data files in bibliography format on a hard-copy printer (the system has been tested on the Epson MX80). You can specify that a title for the entire job be printed at the top of the first page, that category headings be printed or suppressed, that abstracts for the entries be printed or suppressed, and that an author index of the end product be printed. In addition, you can control the way the entries are printed by specifying the number of lines between entries and the page margins (thereby controlling the number of characters per line and the number of lines per page). The system assumes that 8-1/2 by 11-in. paper is being used, which allows 66 lines per page and 80 characters per line.

The format for each bibliography entry is:

- First line indented five spaces;
- Author(s) followed by a period if needed;
- Two spaces followed by the year enclosed in parentheses;
- Two spaces followed by the title and a period if needed;
- Two spaces followed by the source and a period if needed;
- Two spaces followed by the abstract and a period.

If a field does not exist for an entry, the corresponding step is not performed (i.e., if an entry does not have a title, step 4 -- two spaces and the title -- is not performed). If a field ends a line, the two spaces preceding the field of the next step are not printed (i.e., if the title of an entry ends the second line, the two spaces printed before the source in step 4 are not printed at the beginning of line 3).

In addition: 1) if you specify that you want category headings printed, a blank line followed by the category heading (centered) and two blank lines is printed before each entry if its category is different from that of the entry preceding it; if an entry has no category number or a number greater than the number of categories in the Working Category file (see next section), the system assigns it the category label Other; 2) if you specify that you want to print abstracts for the entries, a blank line followed by the abstract and another blank line is printed after each entry; if there is no abstract for an entry, the two blank lines are still printed after the entry; 3) if you give the bibliography a title, the system will print the title centered and underlined on the top line of the first page, followed by four blank lines.

3.1 SETTING UP THE PRINTER

You control the page format by changing the left, right, top, and bottom margins. The number of spaces between entries that you set also affects the appearance of the output pages.

The initial margin settings are:

Left margin: 5
Right margin: 10
Top margin: 7
Bottom margin: 6

The number you enter for the number of spaces between entries should be greater than 0 and less than 66. The system will, however, not check for this. If a number less than 1 is entered, no blank lines will separate each entry. If a number greater than 65 is entered, the printed output will be sporadic and paper will be wasted. Keep also in mind the top and bottom margin and the number of lines each entry will be taking up when you enter the number of lines between entries. Therefore, this number should be less than 65. Use the top and bottom margin settings to position entries on a page. The number of spaces between entries should not exceed 10.

When the system is ready to print the bibliography, it will prompt you to position the printer at the top of a page. This is necessary if the pages are to be formatted properly. For each page of the bibliography the system will: 1) space for the specified top margin; 2) print entries until the page is full (number of lines/page as defined by the top and bottom margins); 3) space half the bottom margin; 4) print the page number; and 4) space for the rest of the bottom margin. An entry is always printed entirely on a page; it will not be split onto more than one page. The entry consists of its category heading (if present), the entry itself, and its abstract (if present). Therefore, if an entry cannot fit on a page, it will be printed in its entirety at the top of the next page.

As mentioned above, you may also print out an author index for the bibliography. The initial top and bottom margin settings for the index are the same as those used for the bibliography unless you choose to change them. The left and right margins cannot be changed for the index. The left margin is set at 5 spaces. Each index page is formatted to have two 30-character columns. The authors are listed alphabetically down the first

column of a page and then down the second column. When the second column is filled, the system starts a new index page. The first column is preceded by the 5-space margin, and the first and second columns are separated by 8 spaces. Each line of a column consists of an author's last name and the page numbers on which bibliography entries for that author exist, separated by leader dots. The page numbers are separated by commas. If an author has two entries on one page, the page number is not printed twice. Trouble may occur if the number of characters in an author's last name and the number of characters needed to list the pages for that author's bibliography entries exceed 30; part of the program may have to be changed (see Appendix A, Program Changes).

NOTE

Option 4 of the Main Menu, PRINT, also allows print-formatted bibliography entries to be output to a diskette file. You must specify a destination for the output when it is requested by the system. This option lets you use the formatted bibliography with text editors such as word processing programs.

3.2 REVIEW OF PRINTING RUN

To print a formatted bibliography on a hard-copy unit, select Main Menu option 4. You will be prompted to insert a data diskette in drive B. At this time, insert the data diskette that contains the category file you want to print. This category file becomes the working category file. If you decide to print category headers for the entries, the reference number for each entry the system reads will refer to the corresponding category name in the working category file.

After you press Enter, the system displays the default printing set-up on the screen (left, right, bottom, and top margin settings and the number of lines/page and characters/line that correspond to the margin settings). See section 3.1 for these default settings. The system then asks you whether you want to change the set-up. Answer Y for yes; any other answer will be taken as no.

If you answer Y, the system will move the cursor to the first margin setting (top margin). You can then change the setting for that margin by entering a number and pressing Enter. To leave the setting unchanged, enter -1 and press Enter. The system checks whether the new margin setting

is valid; if it is not, the system indicates an error and returns to the original margin setting. If the number entered is valid, then the system moves down to the next margin setting and repeats the process. Once the last margin (right margin) is set, the system revises the characters/line and lines/page indicators to correspond to the new settings and again asks whether you want to change the settings. A nonnumerical character or a number less than 1 is invalid for all margin settings. In addition:

- A number greater than 65 is invalid for the top margin setting
- A number greater than 65 minus the top margin setting is invalid for the bottom margin setting;
- A number greater than 79 is invalid for the left margin setting;
- A number greater than 79 minus the left margin setting is invalid for the right margin setting.

Once you answer N to the change set-up prompt, the system will ask a set of 5 questions about what is to be printed. First, the system asks for a title for the bibliography. You may use up to 76 characters. If no title is to be printed, just press the Enter key. If a title longer than 76 characters is entered, an error is indicated and the system prompts for a title again. For the remaining questions, answer Y for yes; any other answer is taken as no.

Second, the system asks whether you want category headers printed for the entries. If the answer is Y, the system reads the category file on the data diskette in drive B. If there is none, the system indicates this and asks whether you want to abort the printing and return to the Main Menu (enter A), insert a new data diskette in drive B and have the system re-try reading the category file (enter R), or forget about printing the category headers for the entries and continue with the printing (enter I). If an invalid answer is entered, the system indicates an error and prompts for an answer again. If the answer is to re-try reading the category file, be sure to insert another data diskette in drive B; the category file on this other data diskette will become the working category file.

Third, the system asks whether you want to print the abstract for each entry along with the entry (only 2 blank lines are printed if the entry has no abstract). Answer this question appropriately.

Fourth, the system asks whether you want an author index kept for the bibliography and printed following the bibliography. Answer this question appropriately.

Fifth, the system asks for the number of blank lines to separate each entry. This question has already been discussed, so see the introduction for details.

After these five questions are answered, the system tells you to position the paper at the top of the form and turn on the printer. You must do this for the bibliography to be properly paged. Press Enter and the printer will skip off the top margin for the first page. The system will ask for the name of the data file that you want to print first. If the specified file does not exist or is not a legal data file (see section 1.4.2, Files), then the system indicates an error and again asks for a data file. If you do not want to continue, press Enter and you will be returned to the Main Menu.

Once a legal, non-empty data file is given, the system begins printing the entries from the data file in the order that they are in the file. Whatever options were set are performed, i.e., if you specified that category headings be printed, category headers are printed for the appropriate entries. See the introduction to this chapter for information on format. To abort the printing of the bibliography, press the F2 key and the system will return to the Main Menu without any further printing or page formatting (i.e., form feed).

After the system completes the printing of the specified data file, it will again prompt for a data file. At this time, either press Enter to quit printing the bibliography and continue with the next step of the program, or enter another data file name. If you enter a data file name, the system repeats the process described above. If the data file is acceptable, the system prints the entries in that file directly after the last entry of the previous file (no extra spaces or form feeds are performed).

NOTE

Do not insert any line feeds or form feeds by hand since this would throw off the page formatting for the rest of the bibliography.

This process is continued until you press the Enter key in response to the data file name prompt.

3.3 AUTHOR INDEX

After you press Enter in response to the data file name prompt and if you specified the printing of an index for the bibliography, the system will display the top and bottom margin settings and the number of lines/page. The system will ask whether you want to change either of these margins for the printing of the index. Answer N for no. Answer B to change the bottom margin; answer T to change the top margin. Any other answer will cause the system to indicate an error and ask the question again. If the answer is either top or bottom margin, then the system moves the cursor to the appropriate spot on the screen and enters the new setting for the margin. If the number entered for the new setting is less than 1 or greater than 65 minus the other margin setting, an error is indicated and you must enter another number. When the system accepts the new setting, it updates the number of lines/page indicator and returns to the margin change question. You can then change the other margin setting or continue by answering N.

Once you answer no to the change margin setting prompt, the system will start printing the index. See the introduction to this chapter for information on the index format. You can stop the printing of the index by pressing F2, but note that the system will return to the Main Menu without any further printing or page formatting, and the index information will be wiped out. To get a new index after pressing F2, you must start from the beginning again (print out the entire bibliography). Page numbers are also printed for the index.

After the index is finished printing or if you press Enter in response to the data file name prompt and no index is to be printed, the printer will feed the paper to the top of the next form and the system will return to the Main Menu.

See Chapter 5, Program Errors, for information about errors during printing of the bibliography.

4. UTILITIES

The utilities are accessed by selecting option 6 on the Main Menu. You will then be told to enter a data diskette in drive B. Insert the data diskette you wish to work on if it is not already in drive B. After you press the Enter key, the Utilities menu appears on the screen:

UTILITIES

Options: 1 -> Delete all CATEGORIES
2 -> Delete FILE
3 -> Rename FILE
4 -> Directory of FILES
5 -> EXIT

Choice?

4.1 DELETE CATEGORY FILE

Option 1 of the Utilities menu lets you delete categories from the data diskette in drive B. When this option is selected you are asked, for safety purposes, whether you're sure you want to delete all the categories. Your answer must be either N or Y. If your answer is no, then you are returned to the Utilities menu. If your answer is yes and a category file does exist on the data diskette in drive B, it is deleted. If it does not exist, an error message is printed to this effect. Either way, you will be returned to the Utilities menu. If you delete the category file and the entries in the data files previously associated with it have reference numbers to the category names, the reference numbers remain with the entries, but the entries are listed in the Other category when they are printed by option 4 of the Main Menu (see Chapter 3, Formatted Printing of Bibliography).

4.2 DELETE DATA FILE

Option 2 of the Utilities menu lets you delete a bibliography data file from the data diskette in drive B. When this option is selected, you are prompted for a data file name. Enter the name of a data file on the current data diskette in drive B (the wild card character ? may be used the same way it is normally used -- see the DOS manual -- to delete more than one data file at a time). If the name is not a legal data file name (see Files section), then an error message is printed to this effect and you must enter another name. When the file name is acceptable, you will be

asked whether you are sure you want to delete this data file. You must answer Y or N.

NOTE

If you wish to exit this option, answer no to this question.

If your answer is no, then you are returned to the Utilities menu. If your answer is yes and the data file exists on the data diskette in drive B, the specified data file is deleted from the diskette. If it does not exist, an error message is printed to this effect. Either way, you are returned to the Utilities menu.

4.3 RENAME DATA FILE

Option 3 of the Utilities menu lets you rename a data file on the data diskette in drive B. When this option is selected, you are prompted for a data file name. Enter the name of a data file on the current data diskette in drive B. If the name is not a legal data file name (see section 1.4.2, Files), an error message is printed and you must enter another name. When the file name is acceptable, you are prompted for the new data file name. Enter the new name for the specified data file. Again, if the name is not a legal data file name, an error message is printed and you must enter another name. When the new file name is acceptable, the system attempts to change the name of the specified data file. An error results if:

- The specified data file does not exist on the data diskette in drive B.
- The new name is the same as that of another data file on the data diskette in drive B.

If an error occurs, the appropriate error message is printed. If not, the specified data file appears on the data diskette in drive B under the new name. In either case, the user is returned to the Utilities menu.

NOTE

Entering DONE in response to the file name prompts for this option aborts the option and returns you to the Utilities menu.

4.4 DIRECTORY OF DATA FILES

Option 4 of the Utilities menu lets you view the contents of the data diskette in drive B. When this option is selected, a directory of the data file names on the data diskette is displayed. All files with a legal data file name (see Files, section 1.4.2) on the diskette are listed. The system indicates whether there is a category file on the data diskette. Press any key to return to the Utilities menu.

4.5 EXIT UTILITIES

Option 5 of the Utilities menu lets you exit from the utility system and return to the Main Menu.

5. PROGRAM ERRORS

The BIBSORT system contains error-trapping routines to catch program errors. However, due to the lack of extensive testing, the program may not catch all errors, especially errors not encountered before. We will call these errors unrecognized errors, and errors that are caught by the program will be called recognized errors. Both of these types of errors can also be classified as fatal or non-fatal errors. Fatal errors are those (recognized or unrecognized) from which the system cannot recover and continue running. Non-fatal errors are errors (recognized or unrecognized) that do not disrupt the running of the program or from which the system can recover and continue running.

Non-fatal errors that are not recognized by the system do not disrupt the running of the program since the system is not even aware that an error has occurred, and the user may not realize an error has occurred for some time (if at all). This kind of error can be worse than a fatal error, since the work produced after the error could be erroneous without your realizing it. Be wary of the occurrence of unrecognized non-fatal errors during sorting, selecting, deleting, or printing within BIBSORT. Check for sorting, selecting, and deleting errors by viewing (option 8 of the BIBSORT menu) the Working List after one of the operations is performed. If you find that an unrecognized non-fatal error has occurred, note what this error was and the data that was being used at the time, and contact the person named below.

Recognized non-fatal errors are usually user errors. These include bad input and no diskette in a drive. The system is set to catch and respond to these user errors with one of the following:

- A beep and a prompt to re-enter the input;
- A beep, a message indicating what was expected from the user, and a prompt to re-enter the input;
- A beep and a message indicating what the system believes to be wrong; you are then required to fix the error and press Enter;
- A beep and a message; you are then required to press Enter, and the system returns to the Main Menu or the previous menu.

The first two responses only occur with input errors. Below is a list of errors that the system is trained to catch and respond to in either form 3 or 4.

<u>Error</u>	<u>Basic error</u>	<u>Form of response</u>
Printer not on	25 or 27	3
Disk not in drive A (or B)	71	3
Improper file name	64 or 67	3
Input too long	14, 15, 16	3
Entry too large for page (opt 4)	9	3
Data disk full (BIBSORT)	61 or 67	4
Disk full (opt 1 and 2)	61 or 67	4
Too many source files (BIBSORT)	9	3
Too many entries (BIBSORT)	9	3
Disk write protected	70	3
File not found (HOUSE)	53	4
File already exists (HOUSE)	58	4
System program missing (Main Menu)	53	Return to DOS

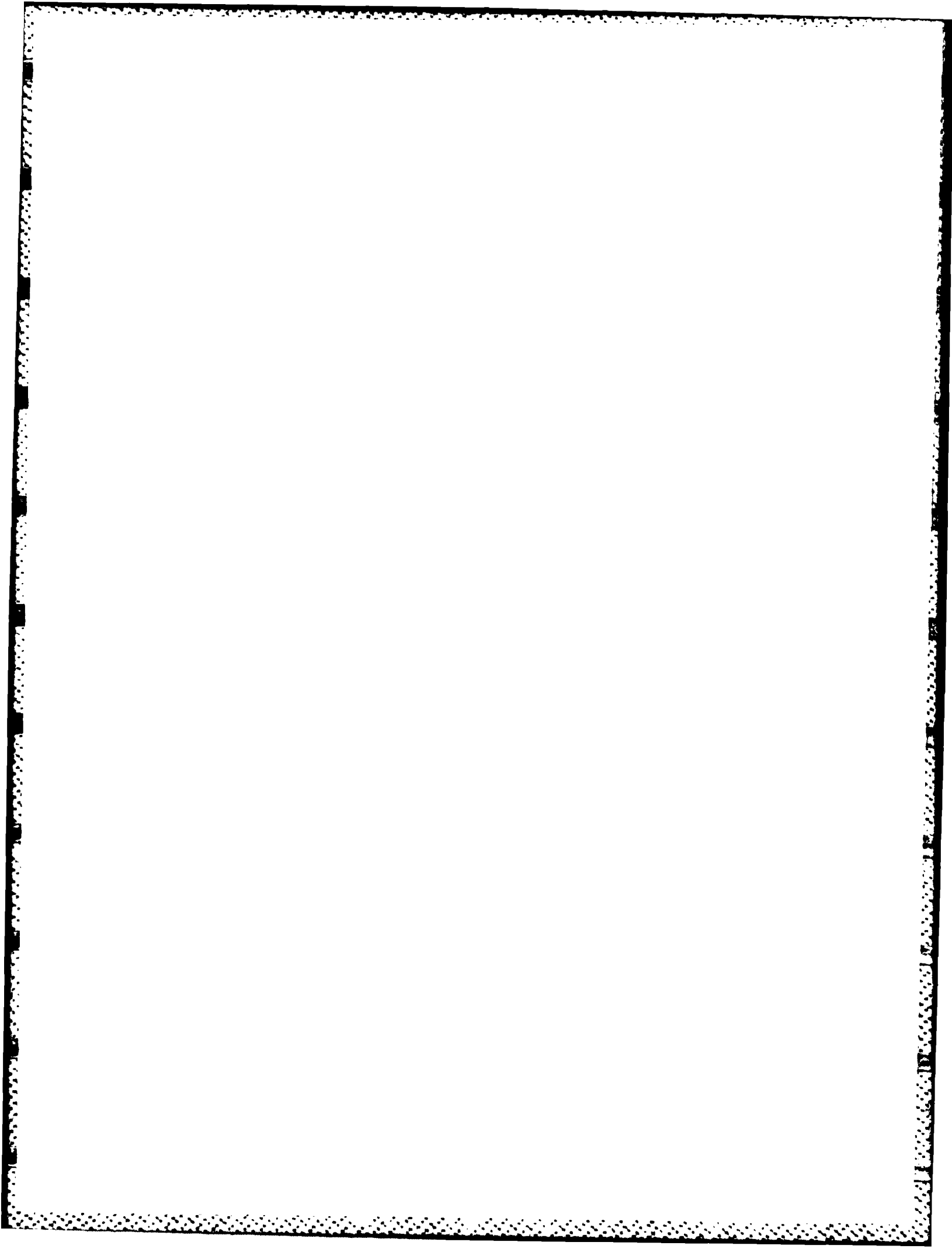
Sometimes a "Disk not in drive B" error may be incorrect. If there is a diskette in drive B, check whether there is a diskette in drive A.

As mentioned above, a fatal error occurs when the system encounters an error that has not been previously encountered. However, fatal errors should be recognized by the system. If one is not recognized, the system will just crash (go blank). Note the circumstances of such a crash and report it to the person named below. If a fatal error is recognized, a message with the basic error number and the location where it occurred is printed at the bottom of the screen with the request that you press the Enter key. The system then clears the screen and prints a message instructing the user. Please follow the directions of the message and contact the person indicated as soon as possible. If this is done, the fatal error may be corrected and the system will be able to trap this error later.

Make problems known to:

Ted Kyriakakis
62 Wamsotte Rd.
Somerset, Massachusetts 02726

or: Dr. Alex Iskandar
U.S. Army Cold Regions Research
and Engineering Laboratory
72 Lyme Road
Hanover, New Hampshire 03755



APPENDIX A: PROGRAM CHANGES

The BIBSORT package stems from a project to create a program for the IBM Personal Computer that would allow the user to manipulate bibliography entries stored in files on a diskette. Ideas and parts of the design were adapted from the BIBLSORT program by Lawrence Robinson at Dartmouth College and were incorporated into the BIBSORT could not be transferred directly due to differences between the mainframe at Dartmouth and the IBM Personal Computer, and between Dartmouth BASIC and Microsoft BASIC.

The rest of the package (everything except BIBSORT) was designed to help the user create and edit files and their bibliography entries. Dartmouth's BIBLSORT program uses sequential access files and requires that the user create and edit the files through editors in their operating system. We decided to use random-access files for quicker and easier access, but this prevents the user from creating and editing the files independently of the package, and requires that the package incorporate utilities for these functions. However, the handling of the entries and files by the package also assures that the files and entries are properly organized and stored.

Certain limits had to be set for the storing of entries in files. Users may want to change these limits according to their needs. Documentation is provided in this appendix for each of the following storage changes:

- Field sizes (i.e., number of characters allowed for author's name, title, etc.)
- Maximum number of categories allowed in category file
- Number of characters allowed for each bibliography entry
- Maximum number of bibliography entries allowed in each file

In addition, documentation is provided for changing program settings for:

- The maximum number of source files allowed to be used with BIBSORT (option 3 of the Main Menu)
- The screen format for viewing entries
- The printer format for printing entries

PREVIOUS PAGE
IS BLANK

You must follow and complete all the directions specified when making a change, or an inconsistency will arise and the package will not perform correctly. Many changes other than those documented here may be made to the package, but they entail a thorough understanding of the package as well as of Microsoft BASIC. It is recommended that you not try to make changes that are not documented.

Before proceeding with the instructions on how to make the specified changes, the organization of the package will be explained to help you in making the changes. The package consists of 6 programs coded in Microsoft BASIC:

- DRIVER
- CATCR
- DATCR
- BIBSRT
- PRINTER
- HOUSE

If one were to do a directory command from DOS on the program diskette, these files with a BAS extension (denoting them as BASIC programs) would appear, as well as several HELP files that document the system's operation. The driver program displays the Main Menu and is the one that is loaded when the Bibliography Program diskette is booted. Each of the other programs is related to an option of the Main Menu:

Option 1 -> CATCR
Option 2 -> DATCR
Option 3 -> BIBSRT
Option 4 -> PRINTER
Option 6 -> HOUSE

When you select an option from the Main Menu, the driver program tells you to insert a data diskette in drive B and then loads the program that corresponds to that option and switches control to that program. Option 5, HELP, is contained within the driver program, so when this option is selected, no other program is loaded. Option 7, EXIT, causes DRIVER to return control to DOS.

To change one or more lines in a program, load the program into memory by choosing the Main Menu option that is associated with it, press Enter in response to the "Insert data disk" prompt, and then, when a new screen appears, press the Control and Break keys simultaneously. You are now within

the BASIC system of the IBM Personal Computer and should use the BASIC editor to modify the program in memory. See the DOS manual for instructions on BASIC editor commands. After making all the specified modifications for a program, save the revised program by typing SAVE "CATCR BAS". If the program is not saved after modification, the modifications will not be saved and you will have to do them over again and save them. To re-enter the package to continue the modifications for another program or to test the completed modifications, re-boot the diskette by pressing the Alternate, Control, and Delete keys simultaneously. This returns you to the Main Menu.

The explanations of the specific changes are formatted as follows:

General format:

Example:

<u>Name of Change</u>	<u>Maximum Number of Categories</u>
program name	CATCR
line number what to change	110 number following T%< (initially 6)
line number what to change	200 number following T%< (initially 6)
program name	BIBSRT
program name	185 number within parentheses (initially 6)

As mentioned above, all modifications listed for a change must be made, unless otherwise noted, for the change to succeed and for the package to work. For instance, according to the example above, to change the maximum number of categories allowed from 6 to 10, one must change the number 6 following "T%<" in lines 110 and 200 of the program CATCR to 10, and change the number 6 within parentheses in line 185 of the program BIBSRT to 10.

A.1 STORAGE CHANGES

The documentation for the storage changes is given below.

A.1.1 Maximum Characters Allowed for Category Name

```

CATCR
  20  number following LEN= (initially 45)
  30  number following #1, (initially 45)
DATCR
  495 number following LEN= (initially 45)
  510 number following #1, (initially 45)
BIBSRT
  220 number following LEN= (initially 45)
  230 number following #1, (initially 45)

```


PRINTER

780 number following LEN= (initially 45)

890 number following #2, (initially 45)

A.1.2 Maximum Characters Allowed for Entry Fields

- A. Author field - Change number preceding "AS A\$" or "AS A2\$" in line numbers listed below (initially 75).
- B. Title field - Change number preceding "AS T\$" or "AS T2\$" in line numbers listed below (initially 160).
- C. Source field - Change number preceding "AS U\$" or "AS U2\$" in line numbers listed below (initially 110).
- D. Abstract field - Change number preceding "AS I\$" or "AS I2\$" in line numbers listed below (initially 158).

Lines referred to above:

DATCR

190

BIBSRT

415

1720

2460

2900

3422

3505

3620

PRINTER

150

Since changing a field size also changes the entry size, adjust the entry size appropriately (i.e., if 5 more characters are allowed for the title, 5 more characters must be allowed for the entry). See Maximum Entry Size below.

Changing the maximum field and/or entry size in the package causes a problem in these old files using the new sizes. A special procedure has been created to help do this. See the Alter Procedure below for instructions. If you do not do this, BIBSORT cannot read the entries in the old files correctly.

Increasing a maximum field size may interfere with the screen display of entries. Determine whether there is a problem by testing the view/edit option of BIBSORT with an entry that has the maximum number of characters in the increased field. If the display is difficult to read, you may want to alter the screen format (see Screen Format for Viewing Entries below).

A.1.3 Maximum Number of Categories

CATCR	
110	number following T%< (initially 6)
200	number following T%> (initially 6)
DATCR	
490	number within parentheses (initially 50)
BIBSRT	
185	number within parentheses (initially 6)

A.1.4 Maximum Entry Size

Increasing the entry size beyond the initial 512 characters causes the package to take longer to read each entry into memory. The package takes about 2-3 seconds to read in 512 characters.

DATCR	
180	number following LEN= (initially 512)
BIBSRT	
400	number following LEN= (initially 512)
1712	number following LEN= (initially 512)
2450	number following LEN= (initially 512)
2890	number following LEN= (initially 512)
3420	number following LEN= (initially 512)
3500	number following LEN= (initially 512)
3522	number following LEN= (initially 512)
3620	number following LEN= (initially 512)
3675	number following LOF(3)/ (initially 512)
PRINTER	
130	number following LEN= (initially 512)

Changing the maximum field and/or entry size in the package causes a problem with previously created entries in files since they are stored using the previous sizes. To account for this, one must re-store the entries in these old files using the new sizes. A special procedure has been created to help the user do this; see Alter Procedure below for instructions. If one does not do this, the entries in the old files will not be read correctly by the package.

A.1.5 Maximum Bibliography Entries Allowed in Each File

DATCR	
215	number following I> (initially 500)
BIBSRT	
160	number within parentheses (initially 500)
165	number within parentheses (initially 500)
3675	number following APP%>= (initially 500)

A.2 OTHER BIBSORT CHANGES

The instructions for changing the other BIBSORT package settings are given below.

A.2.1 Maximum Source Files Used with BIBSRT

BIBSRT

180 number within parentheses (initially 10)

A.2.2 Screen Format for Viewing Entries

This section is only concerned with BIBSRT (option 3 on the Main Menu), so all line references are to the BIBSRT program.

You may want to alter the screen format if you have increased one or more field storage sizes for entries. Changing the screen format is more complex than the previously documented changes, however, and you may encounter problems. The documentation for this change is vague, since the screen format can be changed many ways. You must consider three things:

- How many entries should be displayed on the screen (initially two for viewing and one for editing);
- The position on the screen for each entry,
- The way each field of an entry is printed.

A.2.2.1 Number of Displayed Entries

It is fairly easy to control the number of entries displayed on the screen at one time by changing around the clear screen function (CLS) and the display entry procedure (GOSUB 2870). Currently lines 2640, 2650, and 2700 cause two entries to be displayed for viewing at one time, and line number 2810 causes one entry to be displayed for editing. Increasing the number of entries displayed at one time entails adding another call to the display procedure (GOSUB 2870). Note that you will also have to set CPOS to a number that corresponds to the screen position for the start of the entry. Make sure this number does not cause overwriting of another entry or screen scrolling. Decreasing the number of entries displayed at one time entails the addition of a clear screen (CLS) before a call to the display function. Changing the number of entries displayed at one time almost always requires a change in entry positioning.

A.2.2.2 Entry Positioning

The position of an entry on the screen depends on what the variable CPOS is set to before the display procedure (GOSUB 2870) is called. Currently lines 2640 and 2700 position entries on the screen for viewing, and line 2810 positions an entry for editing. To change the entry positioning, change the value given CPOS in these lines. The number 1 corresponds to the top of the screen and the number 24 to the bottom of the screen. Do not assign CPOS the value 25, since this line is reserved for special purposes. Make sure the change does not cause overwriting of parts of the screen or scrolling.

A.2.2.3 Field Positioning

The positioning of each field of an entry is done in lines 2915 and 2970. The position of each field is relative to the position of the entry itself. Therefore, vertical positioning is done by adding to CPOS. The horizontal position is an arbitrary number set according to the screen layout. Each field is currently displayed by locating the cursor at the correct spot on the screen and then printing the field name followed by the data for that field. To change the location of a field, you must change the LOCATE statement for that field or add one if it is not there already. You can either change the vertical position of the field by changing the number added to CPOS or change the horizontal position of the field by changing the second coordinate of the LOCATE statement. Be very careful of scrolling while setting the vertical positioning, and be careful the right edge of the screen when setting the horizontal positioning.

A.2.3 Printer Format for Printing Entries

This section is only concerned with PRINTER (option 4 on the Main Menu), so all line references are to the PRINTER program.

There are many different formats for bibliography entries. The format used by this package was specified by Dr. Alex Iskandar, but you may wish to change it. This is more difficult than the other documented changes, and the documentation is vague and general. Three parts of the format may be altered:

- Main body of the entry (title, year, author, source)
- Category header
- Abstract

Altering the way the author index is set up is too difficult to document and should only be tried by someone with a very good understanding of the PRINTER program.

A.2.3.1 Main Body

The main body is formatted mainly in lines 211 to 290. The array SNG\$() stores each formatted line. The variable CNTR keeps track of the place in each line. The variable LNE keeps track of which line is being formatted. A formatted line is stored by assigning data to SNG\$(LNE). The other variables are associated with fields as follows:

A\$ - Author
Y\$ - Year
T\$ - Title
U\$ - Source

In lines 211 to 290, the package first adds 5 spaces (line 215), then takes each of the above-listed fields, adds a period after it if a period is not the last character, and adds 2 spaces. The lines that handle each of the fields are as follows:

Author - 220 to 240
Year - 245 to 260
Title - 263 to 275
Source - 278 to 285

You may want to alter the order in which the fields are printed or change the adding of periods (punctuation) or of spaces. Keep in mind, however, that the format must be stored in SNG\$() and that CNTR must be updated to keep track of the number of characters in a line.

A.2.3.2 Category Header

The category header is formatted in lines 940 to 1020. Currently the package centers each header and adds a blank line before it and two lines after it. The centering of the header takes place in line 1010, and the adding of blank lines occurs in lines 1005 and 1010. A category header and the blank lines are not printed if the preceding entry had the same category header. This is checked in line 980. OLCAT\$ is the name of the preceding category header and NCAT\$ is the name of the category header of the current entry. Entries with no category header are given the header

OTHER in line 940. You may want to change the spacing, centering, or naming conventions for the category header. If line spacing is changed, be sure to take into account the updating of the variable LNE to keep track of which line is being formatted and stored in SNG\$().

A.2.3.3 Abstract

The abstract is formatted in lines 560 to 605. Currently the package adds a blank line before the abstract and a line after it, and prints the abstract in block format. To indent the abstract 5 spaces, change line 580 to:

```
580 LET SNG$(LNE)=SPACE$(5): LET CNTR=5: LET X$=I$: GOSUB 500: GOSUB
605
```

You may also want to change the line spacing of the abstract. To add a blank line, add:

```
LET SNG$(LNE)=" ": LET LNE=LNE+1
```

To get rid of a blank line already inserted by the package, delete the appropriate occurrence of the above statement. Be sure to update the variable LNE.

A.3 ALTER PROCEDURE

The alter procedure provides an easy way of updating old files when you want to change the package settings for the author, title, source, or abstract fields of the bibliography entries. If you change one of these field settings and do not update an old file accordingly, that old file cannot be read correctly by the package. The alter procedure does not handle changes to the year, category, or code field sizes. It is recommended that these field sizes not be changed.

The alter procedure is accessed through DOS. For safety reasons, it is not a menu option. To initiate the alter procedure, you must first access the system (DOS), and then type ALTER.

The alter procedure performs its task by first determining the current field sizes for the bibliography entries. This is done by reading a system-specified file on the Bibliography Program diskette in drive A. If for some reason this file does not exist on the diskette, you must supply the current field sizes, which should correspond to the old package settings.

You then supply the new field sizes, which should correspond to the new package settings. If they do not, the updated files will not be read correctly by the package.

After the old and new field sizes have been determined, you will be requested to enter the names of the files to be updated. Enter the names of the files on the current data diskette in drive B whose entries are stored using the old field sizes. If you specify a file that is not stored using the old field sizes, it will not be updated correctly and the package will not be able to use it. The entries in that file could also be irreversibly scrambled. Old files on another data diskette can be updated by entering the DISK command in response to the file prompt and then entering the names of the old files on that data diskette.

Once the old files have been specified, you will be asked whether you want to use continuous mode. Continuous mode is for the user who wants to do something else while the files are being updated. This mode is offered since the updating could take a long time, depending on the number of files and the number of entries in each file.

Regardless of whether continuous mode is used, the alter procedure will attempt to update each specified data file on the diskette in drive B until a DISK command is encountered in the files list. When the DISK command is read, the system signals you to insert in drive B the data diskette that contains the next file in the files list and to press Enter. Then the alter procedure continues updating the data files in the files list. For each file successfully updated, the number of entries converted is displayed (check these numbers to make sure that the correct number of entries is being converted for each file; if the displayed number is incorrect, it is probably because the data file is not stored using the specified old field sizes).

In continuous mode the alter procedure will not be interrupted by a bad file (non-existent file, non-bibliography data file, etc.) in the files list. The alter procedure just indicates that a bad file was encountered and continues with the next file. Normally (without continuous mode), the alter procedure will ask whether to re-try updating a bad file, which gives the user a chance to enter another data diskette in case a mistake was made while entering the file names.

Once all the requested files are updated, the alter procedure lists the bad files encountered during the session, updates the automatic boot

procedure on the program disk according to the new entry size, and updates the system file that contains the field size information according to the new field sizes.

NOTE

If you forget to update a data file and want to update it later, you must re-supply the old field sizes (the settings used for the storage of the forgotten file) by entering NO when the system asks whether the current field size settings are correct and then by entering the old field sizes for the forgotten file.

The alter procedure may be used to either shorten or expand the author, title, source, and/or abstract fields. You may want to shorten a field or fields so that the overall entry size is smaller and the system can read and write entries more quickly, or you may want to expand a field or fields so you can fit in more information. However, you must be aware that shortening a field causes any data in that field that goes beyond the new, shortened field size to be lost, and that expanding a field increases overall record (entry) sizes, which causes the system to take longer when reading and writing entries.

WARNING

Be sure to update the program itself as documented above or the system will not read the updated files correctly.

APPENDIX B: PROGRAM LISTING

DRIVER - 8/31/84

```

10 KEY OFF: ON ERROR GOTO 220: CLS: IF EFLAG>0 THEN LOCATE 5,1: GOSUB 200: GOTO
195 ELSE DIM SECT(11)
15 CLS: LOCATE 2,30: COLOR 0,7: PRINT " MAIN MENU ": COLOR 7,0: LET FINM$="DRIVE
R": LET EFLAG=0: LET SECT(1)=1: LOCATE 5,1: PRINT "OPTIONS: "; SPC(6); "1 -> Create
/Edit/Add CATEGORIES": PRINT SPC(14); "2 -> Create/Append to FILE"
20 PRINT SPC(14); "3 -> Edit/BIBSORT"
30 PRINT SPC(14); "4 -> Print": PRINT SPC(14); "5 -> HELP": PRINT SPC(14); "6 -> Ut
ilities": PRINT SPC(14); "7 -> EXIT"
40 LOCATE 13,4: PRINT "OPTION: ";
50 LOCATE 13,11: PRINT SPACE$(15); LOCATE 13,11: INPUT; "", OPT$: LET OPT%=VAL(O
PT%)
60 IF (OPT%<1) OR (OPT%>7) THEN BEEP: BEEP: GOTO 50
70 IF (OPT%<5) OR (OPT%=6) THEN CLS: LOCATE 11,25: COLOR 23,0: PRINT "INSERT DAT
A DISK IN DRIVE B": LOCATE 13,28: INPUT; "Hit RETURN when ready", DUD$: COLOR 7,0

80 ON OPT% GOTO 90,100,110,120,130,182,190
90 CHAIN "catcr"
100 CHAIN "datcr"
110 CHAIN "bibsrt"
120 CHAIN "printer"
130 GOSUB 260: OPEN HELP$ FOR INPUT AS #1: LET T=0: CLS
135 IF EOF(1) THEN CLOSE: GOSUB 300: GOTO 130
140 LINE INPUT #1, L$
160 LET T=T+1: LET TOTLT=TOTLT+1: IF T>22 THEN GOSUB 300
170 PRINT SPACE$(4); L$: GOTO 135
182 CHAIN "house"
190 CLS: LOCATE 12,24: PRINT "Leaving Bibliography Sort"
195 LOCATE 21,1: SYSTEM: END
200 PRINT SPC(15); COLOR 0,7: PRINT " Previously Unidentified Error Encountered
! ": COLOR 7,0: PRINT: PRINT "Please record the circumstances surrounding the er
ror (what you were"
207 PRINT "doing before the error occurred, what you were doing when the error o
ccurred,": PRINT "and any other unusual observations), and the information below
to Ted Kyriakakis": PRINT: PRINT "Error #:"; EFLAG; " In File: "; FINM$
208 PRINT "At Line #:"; ERL
210 RETURN
220 IF ERR=53 THEN LET MSG$="You erased one of the bibliography programs. Hit
RETURN to continue.": GOSUB 250: RESUME 190
230 LET MSG$="Error #"+STR$(ERR)+" at "+STR$(ERL)+". Hit RETURN to continue."
: GOSUB 250: LET EFLAG=ERR: RESUME 10
250 LOCATE 25,1: BEEP: BEEP: COLOR 0,7: PRINT " "; MSG$; " "; COLOR 7,0: INPUT;
"", DUD$: LOCATE 25,1: PRINT SPACE$(79); RETURN
260 LET SPOT=1: LET SECT(2)=0: LET TOTLT=0: CLS: LOCATE 4,1: PRINT "Help Section
s: "; SPC(5); "0 -> Introduction": PRINT SPC(19); "1 -> Main Menu": PRINT SPC(19); "2
-> Category File": PRINT SPC(19); "3 -> Bibliography Data File"
270 PRINT SPC(19); "4 -> Working With and Arranging Bibliography Entries": PRINT
SPC(19); "5 -> Formatted Printing of Bibliography": PRINT SPC(19); "6 -> Utilities
": PRINT SPC(19); "7 -> Program Errors"
275 LOCATE 25,1: COLOR 0,7: PRINT "For general information and guidance, see sec
tion entitled INTRODUCTION.": COLOR 7,0
280 LOCATE 14,1: INPUT; "Input number of Help section that you want to see (RETU
RN to Exit): ", HLP$
285 IF HLP$="" THEN RETURN 15
290 LET HLP=VAL(HLP$): IF ((HLP=0) AND (HLP$<>"0")) OR (HLP<0) OR (HLP>7) THEN L
OCATE 16,1: BEEP: PRINT "Either enter a number from 0 to 7 or hit RETURN.": GOTO
280
292 ON HLP+1 GOTO 299,299,294,295,296,297,298,299
294 LET SECT(2)=45: LET SECT(3)=67: LET SECT(4)=89: LET SECT(5)=133: LET SECT(6)
=0: GOTO 299
295 LET SECT(2)=45: LET SECT(3)=177: LET SECT(4)=199: LET SECT(5)=353: LET SECT(
6)=375: LET SECT(7)=0: GOTO 299
296 LET SECT(2)=45: LET SECT(3)=111: LET SECT(4)=177: LET SECT(5)=265: LET SECT(
6)=419: LET SECT(7)=441: LET SECT(8)=485: LET SECT(9)=507: LET SECT(10)=551: LET
SECT(11)=0: GOTO 299

```

DRIVER - 8/31/84 (cont'd).

```

297 LET SECT(2)=111: LET SECT(3)=0: GOTO 299
298 LET SECT(2)=23: LET SECT(3)=45: LET SECT(4)=67: LET SECT(5)=111: LET SECT(6)
=0
299 LET HELP$="HELP"+MID$(STR$(HLP),2,1)+".DAT": RETURN
300 LOCATE 25,1: COLOR 0,7: INPUT; " RETURN to continue; S for next section; B f
or previous section; E to stop ",DUD$: COLOR 7,0: IF DUD$="" THEN GOTO 330
305 IF (DUD$="E") OR (DUD$="e") THEN CLOSE: RETURN 130
310 IF (DUD$="B") OR (DUD$="b") THEN GOSUB 340
320 IF (DUD$="S") OR (DUD$="s") THEN GOSUB 350
325 BEEP: GOTO 300
330 IF (SECT(SPOT+1)<>0) AND (TOTLT>=SECT(SPOT+1)) THEN LET SPOT=SPOT+1
332 LET T=1: CLS: RETURN
335 LET T=1: CLS: RETURN 170
340 IF SPOT=1 THEN BEEP: RETURN 300 ELSE CLOSE: OPEN HELP$ FOR INPUT AS #1: LET
SPOT=SPOT-1: LET ND=SECT(SPOT): GOSUB 360: LET TOTLT=SECT(SPOT): RETURN 335
350 IF SECT(SPOT+1)=0 THEN LET DUD$="E": RETURN 305 ELSE LET SPOT=SPOT+1: LET ND
=SECT(SPOT)-TOTLT: GOSUB 360: LET TOTLT=SECT(SPOT): RETURN 335
360 FOR JMP=1 TO ND: LINE INPUT #1,L$: NEXT JMP
365 RETURN

```

CATCH - 8/31/84

```

10 CLS: LET T%=0: LET EFLAG=0: LET FINM$="CATCH": ON ERROR GOTO 390
20 OPEN "B:CAT.DAT" AS #1 LEN=45
30 FIELD #1,45 AS CAT$
35 IF LOF(1)>0 THEN BEEP: LOCATE 10,1: PRINT "Categories already exist on curren
t disk in drive B!": GOSUB 200 ELSE GOSUB 160: GOSUB 220
37 CLOSE: COMMON EFLAG,FINM$: CHAIN "driver": END
40 CLS: LOCATE 5,1: COLOR 0,7: PRINT HED$; " Enter DONE when finished. ": COLOR 7
,0
60 PRINT
70 PRINT "Category Name";T%+1;: LINE INPUT NAM$
80 IF NAM$ = "DONE" OR NAM$ = "done" THEN GOTO 120
85 IF (NAM$="") OR (NAM$=SPACE$(LEN(NAM$))) THEN BEEP: LOCATE CSRLIN-1,1: GOTO 7
0
90 LSET CAT$ = NAM$
100 LET T%=T%+1: PUT #1,T%
110 IF T%<6 THEN GOTO 60 ELSE LET X=CSRLIN: LOCATE 25,5: COLOR 16,7: PRINT " NO
MORE THAN 6 CATEGORIES ALLOWED. ";: COLOR 7,0: LOCATE X+3,1: INPUT "HIT <RETURN>
TO STOP",DUD$
120 LSET CAT$ = STRING$(1,0)
130 PUT #1: LSET CAT$=STR$(T%): PUT #1,8
150 RETURN
160 LET HED$=" Entering categories "
170 GOSUB 40: RETURN
200 GET #1,8: LET T%=VAL(CAT$): IF T%>=6 THEN GOTO 220
210 PRINT: INPUT "Do you want to add categories (enter Y or N)";APP$
214 IF (APP$="Y") OR (APP$="y") THEN LET HED$=" Appending categories ": GOSUB 40

220 PRINT: INPUT "Do you want to edit categories (enter Y or N)";EDT$
230 IF (EDT$="N") OR (EDT$="n") THEN GOTO 250
240 GOSUB 260
250 RETURN
260 CLS: LOCATE 2,1: COLOR 0,7: PRINT " EDITING CATEGORIES ": LOCATE 4,1: COLOR
7,0: PRINT "Categories:"
270 FOR CT=1 TO T%
285 GET #1,CT: LET X$=CAT$: GOSUB 330
290 PRINT SPC(13);: COLOR 0,7: PRINT CT;: COLOR 7,0: PRINT " -> ";: COLOR 15,0:
PRINT X$
295 NEXT CT
300 IF T%=0 THEN PRINT: PRINT: PRINT "No categories in directory!": GOTO 329
310 LOCATE 22,1: PRINT "Which category name to edit:": LOCATE 25,1: COLOR 0,7:
PRINT " Enter 0 to exit edit ";: COLOR 7,0
315 LOCATE 22,29: PRINT SPACE$(10);: LOCATE 22,29: INPUT; NM$
317 IF NM$="0" THEN GOTO 329
318 LET NM%=VAL(NM$)

```

DATCR - 8/31/84 (cont'd).

```
320 IF NM%<1 OR NM%>T% THEN BEEP: LOCATE 22,45: PRINT "Enter integer between 0 a
nd";T%; GOTO 315
324 LOCATE 4+NM%,21: INPUT; "",CHNG$: IF (CHNG$="") OR (CHNG$=SPACE$(LEN(CHNG$))
) THEN BEEP: LOCATE 4+NM%,21: GET #1,NM%: LET X$=CAT$: GOSUB 330: PRINT X$: GOTO
324
325 LSET CAT$=CHNG$: PUT #1,NM%
327 GOTO 315
329 RETURN
330 IF MID$(X$,1,1)=STRING$(1,127) THEN LET X$="": GOTO 380
335 LET POSS=-1
340 LET POSS=INSTR(POSS+2,X$," ")
350 IF POSS=0 THEN GOTO 380
360 IF MID$(X$,POSS,LEN(X$)-POSS)<>SPACE$(LEN(X$)-POSS) THEN GOTO 340
370 LET X$=MID$(X$,1,POSS)
380 RETURN
390-IF ERR=71 THEN LET MSG$="Insert Disk into Drive B! Hit RETURN when ready.":
GOSUB 440: GOTO 450
400 IF (ERR=67) OR (ERR=61) THEN LET MSG$="Disk Full! Either erase files from d
ata disk or use new one. Hit RETURN.": GOSUB 440: RESUME 37
410 IF ERR=70 THEN LET MSG$="Disk Write Protected! Insert another data disk in
Drive B. Hit RETURN.": GOSUB 440: GOTO 450
430 LET MSG$="Error #"+STR$(ERR)+" at "+STR$(ERL)+". Hit RETURN to continue."
: GOSUB 440: LET EFLAG=ERR: RESUME 37
440 LOCATE 25,1: BEEP: BEEP: COLOR 0,7: PRINT " ";MSG$;" ";: COLOR 7,0: INPUT;
"",DUD$: LOCATE 25,1: PRINT SPACE$(79);: RETURN
450 RESUME 0
```

DATCR - 8/31/84

```
155 ON ERROR GOTO 940: LET FINM$="DATCR": LET EFLAG=0: ON KEY(1) GOSUB 1100: KEY
(1) OFF: CLS: GOSUB 490: PRINT
160 KEY(1) ON: LOCATE 3,35: PRINT SPACE$(15);: LOCATE 3,1: INPUT "Filename (hit
RETURN key to exit)";NAM$: KEY(1) OFF
170 IF NAM$ = "" THEN GOTO 380
172 IF (LEN(NAM$)>8) OR (INSTR(1,NAM$,".")>0) THEN BEEP: PRINT "DATA file names
do not have extensions!": GOTO 160
180 OPEN "B:"+NAM$+".bst" AS #1 LEN=512
190 FIELD #1,2 AS C$, 2 AS Y$, 5 AS S$, 75 AS A$, 160 AS T$, 110 AS U$, 158 AS I
$
191 IF LOF(1)>0 THEN GOSUB 430: ON FLG+1 GOTO 215,380,160
192 LSET C$="*^": LSET T$="^":pz)"
195 PUT #1
200 LET HED$="ENTERING ENTRIES FOR FILE: "
210 LET I = 1
215 IF I>500 THEN BEEP: LOCATE 25,1: COLOR 0,7: PRINT " NO MORE ENTRIES ALLOWED
IN FILE ";: COLOR 7,0: LOCATE 23,1: GOTO 380
220 CLS: PRINT: PRINT: PRINT HED$:;: COLOR 0,7: PRINT " ";NAM$;" ": COLOR 7,0
230 LOCATE 8,1: PRINT "ENTRY";I
240 PRINT " Category #:";SPC(20);: COLOR 0,7: PRINT " enter 0 when done ";: CO
LOR 7,0: LET X=CSRLIN: LOCATE X,15: INPUT " ",CT$
242 IF CT$="0" THEN GOSUB 390: GOTO 380
244 IF (CT$="") OR (CT$=SPACE$(LEN(CT$))) THEN LET CT$=STRING$(1,127): GOTO 250
245 LET C%=VAL(CT$): IF C%=0 THEN BEEP: PRINT: PRINT: PRINT "Enter a number asso
ciated with a category.": PRINT: PRINT: INPUT "<HIT RETURN>",DUD$: GOSUB 790: GO
TO 215
247 GOSUB 750: IF FLG=1 THEN GOTO 215
250 LET X=CSRLIN: INPUT " Year:",YEAR$: GOSUB 840: IF FLG=1 THEN GOTO 25
0
260 LET X=CSRLIN: INPUT " Code:",CDE$: IF LEN(CDE$)>5 THEN GOSUB 880: GO
TO 260
262 IF (CDE$="") OR (CDE$=SPACE$(LEN(CDE$))) THEN LET CDE$=STRING$(1,127)
270 LET AUTH$="": PRINT " Author(s):"
272 LOCATE 13,17: PRINT "Last name - ";SPACE$(15);: COLOR 0,7: PRINT " hit RETUR
N when done ";: COLOR 7,0: LOCATE 13,29: INPUT "",LAS$: IF LAS$="" THEN GOTO 278
```

DATE - 8/31/84 (cont'd).

```

275 LET X=XSRLIN: INPUT "
THEN GOSUB 880: GOTO 275
277 LET AUTH$=AUTH$+"*@"+LAS$+" ", "+FIR$+" ": GOTO 272
278 IF LEN(AUTH$)=0 THEN LET AUTH$=STRING$(1,127): GOTO 280
279 LET AUTH$=MID$(AUTH$,3,LEN(AUTH$)-2): IF INSTR(1,AUTH$,"*@")>0 THEN GOSUB 10
10
280 LOCATE 15,9: LINE INPUT "Title:",TITL$: IF (TITL$="") OR (TITL$=SPACE$(LEN(T
ITL$))) THEN LET TITL$=STRING$(1,127)
285 LINE INPUT "          Source: ";SOU$: IF (SOU$="") OR (SOU$=SPACE$(LEN(SOU$))) T
HEN LET SOU$=STRING$(1,127)
290 LINE INPUT "          Abstract: ",ABST$: IF ABST$=SPACE$(LEN(ABST$)) THEN LET ABST
$=STRING$(1,127)
300 LSET C$= CT$
310 LSET Y$ = YEAR$
320 LSET S$ = CDE$
330 LSET A$ = AUTH$
340 LSET T$ = TITL$
345 LSET U$=SOU$
350 LSET I$ = ABST$
360 PUT #1
365 LET I = I + 1
370 GOTO 215
380 CLOSE: COMMON FINM$,EFLAG: CHAIN "driver": END
370 LOC C$=STRING$(1,0)
400 LSET T$=STRING$(1,0)
410 PUT #1
420 RETURN
430 CLS: LET FLG=0: PRINT: PRINT: PRINT: COLOR 0,7: PRINT " ";NAM$;" ": COLOR 7
,0: PRINT " already exists. Do you wish to append entries to it (enter Y or N)"
;
440 INPUT ANS$
450 IF (ANS$<>"Y") AND (ANS$<>"y") THEN LET FLG=1: GOTO 480
460 GET #1: IF (MID$(C$,1,2)<>"*^") OR (MID$(T$,1,6)<>"~!pz") THEN LET FLG=2:
BEEP: PRINT: PRINT "Can not append to this file!": CLOSE #1: GOTO 480
470 LET CODE%=LOF(1)/512-1: LET I=CODE%: GET #1,CODE%
475 LET HED$="APPENDING ENTRIES TO FILE: "
480 RETURN
490 DIM M$(50)
495 OPEN "B:CAT.DAT" AS #1 LEN=45
500 IF LOF(1)=0 THEN PRINT: BEEP: PRINT: PRINT: PRINT "NO CATEGORY FILE ON DISK
IN DRIVE B.": CLOSE #1: KILL "B:CAT.DAT": GOSUB 570: LET NC=0: RETURN
510 FIELD #1,45 AS CAT$: LET NC=0
520 GET #1
530 IF ASC(CAT$)=0 THEN GOTO 550
540 LET NC=NC+1: LET M$(NC)=CAT$
545 GOTO 520
550 IF NC=0 THEN BEEP: PRINT: PRINT: PRINT "NO CATEGORIES SPECIFIED IN CATEGORY
FILE!": GOSUB 570: RETURN
560 CLOSE #1: GOSUB 790: RETURN
570 PRINT: INPUT "ABORT (enter Y or N)";ANS$: IF (ANS$<>"N") AND (ANS$<>"n") THE
N GOTO 380 ELSE CLS: RETURN
750 LET FLG=0
755 IF (CX<1) OR (CX>NC) THEN BEEP: PRINT: PRINT: PRINT "Number";CX;" not associ
ated with a category.": PRINT: PRINT: INPUT "<HIT RETURN>",DUD$: GOSUB 790: LET
FLG=1: GOTO 780
760 LOCATE X,18: PRINT " -> ";: COLOR 0,7: PRINT " ";M$(CX);" ": COLOR 7,0: INF
UT "      OK";OK$
770 IF (MID$(OK$,1,1)="N") OR (MID$(OK$,1,1)="n") THEN GOSUB 790: LET FLG=1
780 RETURN
790 CLS: PRINT: PRINT: IF NC=0 THEN PRINT "NO CATEGORIES!!!!": GOTO 830
795 PRINT "VALID CATEGORIES:"
800 FOR CT=1 TO NC
810 PRINT SPC(20);: COLOR 0,7: PRINT CT;: COLOR 7,0: PRINT " -> ";M$(CT)
820 NEXT CT
830 PRINT: PRINT: INPUT "<HIT RETURN>",DUD$: CLS: RETURN
840 LET FLG=1
842 IF LEN(YEAR$)<=2 THEN GOTO 850
845 IF MID$(YEAR$,1,2)<>"19" THEN GOSUB 880: GOTO 870
847 LET YEAR$=MID$(YEAR$,3,LEN(YEAR$)-2)
848 IF LEN(YEAR$)>2 THEN GOSUB 880: GOTO 870
850 IF VAL(YEAR$)=0 THEN GOSUB 880: LET FLG=1: GOTO 870

```

DATCR - 8/31/84 (cont'd).

```

860 IF LEN(YEAR$)<2 THEN GOSUB 880: GOTO 870
865 LET FLG=0
870 RETURN
880 BEEP: LOCATE X,1: PRINT TAB(15);SPACE$(30): LOCATE X,1: RETURN
890 LET FLG=0: IF LEN(FIR$)<>1 THEN IF (LEN(FIR$)<>2) THEN LET FLG=1: GOTO 930 ELSE GOSUB 1040: GOTO 930
900 IF (ASC(FIR$)>64) AND (ASC(FIR$)<91) THEN GOTO 930
910 IF (ASC(FIR$)<97) OR (ASC(FIR$)>122) THEN LET FLG=1: GOTO 930
920 LET FIR$=CHR$(ASC(FIR$)-32)
930 RETURN
940 LET XPL=CSRLIN: LET YPL=POS(0)
945 IF (ERR=61) OR (ERR=67) THEN LET MSG$="Disk full! Erase file(s) or use another disk! Hit RETURN.": GOSUB 1000: RESUME 380
950 IF ERR=64 THEN LET MSG$="Improper Filename! Hit RETURN and Try Again.": GOSUB 1000: RESUME 160
955 IF ERR=70 THEN LET MSG$="Disk write protected! Hit RETURN.": GOSUB 1000: RESUME 380
960 IF (ERR>13) AND (ERR<17) THEN LET MSG$="Input Too Long! Hit return and try again.": GOSUB 1000: GOTO 970
970 IF ERR=71 THEN LET MSG$="Insert Disk into Drive B! Hit RETURN when ready.": GOSUB 1000: RESUME 380
980 LET MSG$="Error #"+STR$(ERR)+" at "+STR$(LRL)+" Hit RETURN to continue.": GOSUB 1000: LET EFLAG=ERR: RESUME 380
990 LOCATE XPL,YPL: RESUME 0
1000 LOCATE 25,1: BEEP: BEEP: COLOR 0,7: PRINT " ";MSG$: " ": COLOR 7,0: INPUT " ";DUD$: LOCATE 25,1: PRINT SPACE$(79): RETURN
1010 LET X$="": LET STRT=1: LET OMRKR=INSTR(1,AUTH$,"*")
1020 LET MRKR=INSTR(OMRKR+2,AUTH$,"*"): IF MRKR<>0 THEN LET X$=X$+MID$(AUTH$,STRT,OMRKR-STRT)+", ": LET STRT=OMRKR+2: LET OMRKR=MRKR: GOTO 1020
1030 LET X$=X$+MID$(AUTH$,STRT,OMRKR-STRT)+" and "+MID$(AUTH$,OMRKR+2,LEN(AUTH$)-OMRKR-1): LET AUTH$=X$: RETURN
1040 LET X$=FIR$: LET FIR$=MID$(X$,1,1): GOSUB 900: IF FLG=1 THEN GOTO 1060
1050 LET FIRH$=FIR$+".": LET FIR$=MID$(X$,2,1): GOSUB 900: IF FLG=1 THEN LET FIR$=FIRH$+FIR$
1060 RETURN
1100 LOCATE 8,20: FILES "b:*.bst": RETURN 160

```

BIBSRT - 8/31/84

```

35 CLS: ON ERROR GOTO 3300: LET FINM$="bIBSRT": LET EFLAG=0: ON KEY(1) GOSUB 400
0: KEY(1) OFF
100 LOCATE 2,32: COLOR 0,7: PRINT " BIBSRT ": COLOR 7,0: PRINT: GOSUB 160
110 GOSUB 310
115 IF T=0 THEN GOTO 150
120 IF K=0 THEN PRINT: INPUT "<Hit Return>";DUD$: CLS: BEEP: BEEP: PRINT "NO ENTERIES READ!": PRINT: PRINT: GOTO 110 ELSE CLS
130 GOSUB 720
140 IF OPT<>4 THEN GOTO 130
150 IF CSRLIN<23 THEN LET XCSR=CSRLIN+2 ELSE LET XCSR=CSRLIN
155 CLOSE: LOCATE XCSR,32: COLOR 16,7: PRINT " HOLD ON ": COLOR 7,0: COMMON FINM$,EFLAG: CHAIN "driver": END
160 DIM H$(500)
165 DIM H2$(500)
170 DIM STACK(100)
175 DIM UP(500,3)
180 DIM N$(10)
185 DIM M$(6)
215 LET TOP=1: LET OPT=0
220 OPEN "B:CAT.DAT" AS #1 LEN=45
225 IF LOF(1)=0 THEN CLOSE #1: KILL "B:CAT.DAT": GOTO 292
230 FIELD #1,45 AS CAT$
240 LET M=0
250 GET #1
260 IF ASC(CAT$)=0 THEN GOTO 290
270 LET M=M+1

```

```

275 LET M$(M)=CAT$
280 GOTO 250
290 CLOSE #1
292 FOR CT=1 TO 6: READ D(CT): NEXT CT
295 DATA 6,8,10,15,45,120
300 RETURN
310 PRINT "Input Source File(s). Enter DONE when finished."
315 PRINT SPC(15); "Enter DISK to enter Source File from another disk."
330 LET T=0: LET DSKFLG=0: LET LDC=1: LET RTFL=0: LET FSPT=13: KEY(1) ON
340 LOCATE 7,1: PRINT "Source File";SPACE$(50); LOCATE 7,12: INPUT;"":NT$
350 IF (NT$="DONE") OR (NT$="done") THEN KEY(1) OFF: GOTO 385
355 IF (NT$="disk") OR (NT$="DISK") THEN LET LDC=T+2: IF (T=0) OR (N$(T)="DISK")
  OR (N$(T)="disk") THEN GOTO 340
356 LET FCT=LDC
357 IF NT$=N$(FCT) THEN GOTO 340
358 LET FCT=FCT+1: IF FCT<=T THEN GOTO 357
360 LET T=T+1
370 LET N$(T)=NT$
380 GOTO 340
385 LET K=0: PRINT: LET T1=0: LET T4=0
390 FOR J=1 TO T
392 IF N$(J)="" THEN 440
394 IF (N$(J)="DISK") OR (N$(J)="disk") THEN GOSUB 3280: GOTO 440
395 IF (LEN(N$(J))>8) OR (INSTR(1,N$(J),".")>0) THEN GOSUB 2000: GOTO 440
397 LET PL=1
400 OPEN "B:"+N$(J)+".bst" AS #2 LEN=512
410 IF LOF(2)=0 THEN CLOSE #2: KILL "B:"+N$(J)+".bst": GOSUB 2000: GOTO 440
415 FIELD #2,2 AS C$,2 AS Y$,5 AS S$,75 AS A$,160 AS T$,110 AS U$,158 AS I$
417 GET #2: IF (C$<>"*^") OR (MID$(T$,1,6)<>"^!pz") THEN GOSUB 2000: GOTO 430
420 GOSUB 620
430 CLOSE #2
440 NEXT J
450 LET FD=K: RETURN
530 CLOSE #3: CLS: PRINT: PRINT: BEEP: PRINT "PRINT ABORTED!": RETURN
620 GET #2
625 IF (ASC(C$)=0) AND (ASC(T$)=0) THEN GOTO 710
630 LET K=K+1: LET PL=PL+1: LET TK=K
640 LET X$=A$: LET A1=75: GOSUB 950
650 LET A1=X$: LET X$=T$: LET A1=30
660 GOSUB 950: GOSUB 1015
670 LET T1=X$
680 LET X$=C$: LET A1=2: GOSUB 1015
682 LET H$(TK)=X$: LET X$=Y$: GOSUB 1015
685 LET H$(TK)=H$(TK)+X$: LET X$=S$: LET A1=5: GOSUB 1015
690 LET H$(TK)=H$(TK)+X$: LET X$=MID$(STR$(PL),2,LEN(STR$(PL))-1): LET A1=3: GOS
  UB 1015: LET H$(TK)=STR$(J)+X$+H$(TK)+T1$+A1$
700 LET H2$(TK)=H$(TK): IF OPT<>8 THEN GOTO 620
710 RETURN
720 PRINT FD;"entries are in working list.": PRINT: PRINT
725 PRINT "OPTIONS:"
730 IF FD>0 THEN PRINT SPC(15); "1 -> SORT": PRINT SPC(15); "2 -> SELECT"
740 IF FD>0 THEN PRINT SPC(15); "3 -> SAVE"
742 PRINT SPC(15); "4 -> EXIT"
745 IF FD>0 THEN PRINT SPC(15); "5 -> DELETE"
750 PRINT SPC(15); "6 -> ORIGINAL": PRINT SPC(15); "7 -> SOURCE"
755 PRINT SPC(15); "8 -> VIEW-EDIT": PRINT
760 INPUT "CHOICE";OPT: IF (FD<1) AND ((OPT<4) OR (OPT=5)) THEN BEEP: PRINT "NO
  WORKING ENTRIES. OPTION NOT ALLOWED!": GOTO 760
770 IF (OPT<1) OR (OPT>8) THEN BEEP: PRINT "ILLEGAL OPTION! "; GOTO 760
780 ON OPT GOTO 790,820,830,860,900,910,930,937
790 LET LO=1: LET RO=K: CLS
800 GOSUB 1030: CLS
810 LET T1=1: GOTO 940
820 CLS: GOSUB 1310: GOTO 940
830 IF T1<>0 THEN GOTO 850
840 PRINT: PRINT "Nothing has been done to the working list yet."
842 INPUT "Do you still want to write it to a file (enter Y or N)";ANS$
845 IF (ANS$<>"Y") AND (ANS$<>"y") THEN CLS: GOTO 940
850 GOSUB 1670: GOTO 940
860 IF (T4=1) OR (FD<1) THEN GOTO 940
870 PRINT: PRINT "Your work has not been saved."

```

BIBSRT - 8/31/84 (cont'd).

```

875 INPUT "Do you still want to EXIT (enter Y or N)";ANS$
880 IF (ANS$<>"Y") AND (ANS$<>"y") THEN LET OPT=0: CLS
890 GOTO 940
900 CLS: GOSUB 1880: LET T1=1: GOTO 940
910 IF T1<>0 THEN FOR CT=1 TO K: LET H$(CT)=H2$(CT): NEXT CT: LET FD=K
920 CLS: PRINT: PRINT: PRINT "Now working on original working list.": GOTO 940
930 CLS
932 GOSUB 310: IF T=0 THEN LET OPT=4: GOTO 940
935 IF K=0 THEN PRINT: INPUT "<Hit Return>",DUD$: CLS: BEEP: BEEP: PRINT "NO ENT
RIES READ!": PRINT: PRINT: GOTO 932
936 CLS: GOTO 940
937 GOSUB 2050: CLS
940 RETURN
950 LET XLEN=LEN(X$): LET X2=1: LET X1=0: LET YH$=""
955 IF (X1=A1) OR (X2>XLEN) THEN GOTO 1010
957 LET CHA$=MID$(X$,X2,1)
960 IF (INSTR(1,".,",CHA$)>0) AND (A1>29) THEN GOTO 995
965 IF (CHA$=" ") AND (A1=75) THEN GOTO 1000
970 LET YH$=YH$+CHA$: GOTO 990
990 LET X1=X1+1: GOTO 1000
995 IF A1=75 THEN GOSUB 2010
1000 LET X2=X2+1: GOTO 955
1010 LET X$=YH$
1012 RETURN
1015 IF LEN(X$)<A1 THEN LET X$=X$+SPACE$(A1-LEN(X$))
1020 RETURN
1030 PRINT: PRINT: PRINT "Sorting Keys:      1 -> category": PRINT SPC(19);"2 ->
year"
1040 PRINT SPC(19);"3 -> code": PRINT SPC(19);"4 -> title"
1070 PRINT SPC(19);"5 -> author"
1080 PRINT
1090 INPUT "Which key to sort";KEY1
1095 IF (KEY1<1) OR (KEY1>5) THEN BEEP: PRINT "BAD INPUT! ";: GOTO 1090
1100 IF KEY1=5 THEN LET KEYA=2 ELSE LET KEYA=5
1105 LET L=L0: LET R=R0: LET IT1$=H$(L0): LET HOLD=0
1108 LET G$="RGT": LET F$="CNT"
1109 IF L=R THEN GOTO 1140
1110 GOSUB 1180
1120 IF F$="SWI" THEN GOSUB 1250 ELSE GOSUB 1290
1130 GOTO 1109
1140 LET H$(L)=IT1$
1150 IF L=L-1 THEN GOSUB 1800: GOSUB 1105: GOSUB 1840
1160 IF R+1 R0 THEN LET L0=R+1: GOSUB 1105
1170 RETURN
1180 IF G$="RGT" THEN LET CK1$=H$(R): LET CK2$=IT1$: GOTO 1200
1190 LET CK1$=IT1$: LET CK2$=H$(L)
1200 LET K1$=MID$(CK1$,D(KEY1),D(KEY1+1)-D(KEY1))
1210 LET K2$=MID$(CK2$,D(KEY1),D(KEY1+1)-D(KEY1))
1220 IF (K1$=K2$) AND (HOLD=0) THEN LET HOLD=KEY1: LET KEY1=KEYA: GOSUB 1180: LE
T KEY1=HOLD: LET HOLD=0: GOTO 1240
1230 IF K1$<K2$ THEN LET F$="SWI"
1240 RETURN
1250 IF G$="RGT" THEN GOTO 1270
1260 LET G$="RGT": LET H$(R)=H$(L): LET R=R-1: GOTO 1275
1270 LET G$="LFT": LET H$(L)=H$(R): LET L=L+1
1275 LET F$="CNT"
1280 RETURN
1290 IF G$="RGT" THEN LET R=R-1 ELSE LET L=L+1
1300 RETURN
1310 PRINT: PRINT: PRINT "Valid Selections:": PRINT SPC(25);"A=<AUTHOR>"
1320 PRINT SPC(25);"T=<TITLE>": PRINT SPC(25);"C=<CATEGORY>"
1325 PRINT SPC(25);"S=<CODE>": PRINT SPC(25);"Y=<YEAR>"
1327 PRINT SPC(25);"E      (to exit)"
1330 PRINT: PRINT "NOTE: Can use '<' and '>' for YEAR as well as '='."
1332 PRINT "      Do not put spaces in input unless it contains spaces."
1335 PRINT: LINE INPUT "SELECT:",SEL$
1337 IF (SEL$="E") OR (SEL$="e") THEN LET SEL$="E": CLS: RETURN
1340 LET NSEL=INSTR(1,"CYSTA",MID$(SEL$,1,1))
1350 LET NCOM=INSTR(1,"=<>",MID$(SEL$,2,1))
1360 IF (NSEL=0) OR (NCOM=0) OR (LEN(SEL$)<2) OR ((LEN(SEL$)<3) AND (NSEL=2) AND
(NCOM<>1)) THEN CLS: BEEP: PRINT: PRINT "BAD INPUT! ";SEL$: GOTO 1310

```

BIBSRT - 8/31/84 (cont'd).

```

1370 IF (NCOM=1) AND (NSEL<2) THEN BEEP: PRINT: PRINT "X" and "Y" only valid f
or YEAR selection.": GOTO 1375
1390 IF LEN(SEL$)>2 THEN LET X$=MID$(SEL$,3,LEN(SEL$)-2) ELSE LET X$=STRING$(1,1
27)
1391 IF (NSEL=2) AND (LEN(X$)>2) THEN LET X$=MID$(X$,3,LEN(X$)-2)
1392 IF NCOM=1 THEN GOTO 1460
1395 IF (NSEL=1) AND (X$<>STRING$(1,127)) THEN GOSUB 1550: IF CT=M THEN BEEP: PR
INT "BAD CATEGORY!": GOTO 1335
1400 IF NSEL>3 THEN GOTO 1640
1410 FOR CT=1 TO K
1415 IF H$(CT)="GO" THEN GOTO 1430
1420 IF INSTR(1,MID$(H$(CT),D(NSEL),D(NSEL+1)-D(NSEL)),X$)<>1 THEN LET H$(CT)="G
O": LET FD=FD-1
1430 NEXT CT
1440 CLS: PRINT: PRINT "There were ";FD;" entries found which corresponded to ";
SEL$;". "
1450 LET T1=1: RETURN
1460 IF NCOM=2 THEN GOTO 1510
1470 FOR CT=1 TO K
1480 IF (H$(CT)<>"GO") AND (VAL(MID$(H$(CT),D(NSEL),D(NSEL+1)-D(NSEL)))<=VAL(X$)
) THEN LET H$(CT)="GO": LET FD=FD-1
1490 NEXT CT
1500 GOTO 1440
1510 FOR CT=1 TO K
1520 IF (H$(CT)<>"GO") AND (VAL(MID$(H$(CT),D(NSEL),D(NSEL+1)-D(NSEL)))>=VAL(X$)
) THEN LET H$(CT)="GO": LET FD=FD-1
1530 NEXT CT
1540 GOTO 1440
1550 FOR CT=1 TO M
1590 IF INSTR(1,M$(CT),X$)=1 THEN LET X$=STR$(CT): LET X$=RIGHT$(X$,LEN(X$)-1):
GOTO 1630
1600 NEXT CT
1610 LET CT=M+1
1630 RETURN
1640 IF NSEL=5 THEN LET A1=75 ELSE LET A1=30
1650 GOSUB 950
1652 FOR CT=1 TO K
1655 IF (H$(CT)<>"GO") AND (INSTR(1,MID$(H$(CT),D(NSEL),D(NSEL+1)-D(NSEL)),X$)=0
) THEN LET H$(CT)="GO": LET FD=FD-1
1657 NEXT CT
1660 GOTO 1440
1670 CLS: LET CT=2: LET BEG=1: LET PFILE=0: LET FLG=1: IF DSKFLG=1 THEN GOSUB 34
80: GOTO 1679
1672 LOCATE 2,1: PRINT "Do you want to put the OUTPUT file on a disk other than"
: INPUT: "the one currently in DRIVE B (enter Y for yes)";ANS$
1673 IF (ANS$="Y") OR (ANS$="y") THEN LET DSKFLG=1: GOSUB 3480: LET DSKFLG=0: GO
TO 1679
1675 GOSUB 3400: IF FLG=0 THEN GOSUB 530: GOTO 1679
1676 IF FLG=2 THEN GOTO 1679
1677 GOSUB 1680
1678 IF FLG<0 THEN GOSUB 1763
1679 RETURN
1680 LET ECT=0
1685 FOR CT=BEG TO K
1690 IF H$(CT)="GO" THEN GOTO 1760
1700 LET FLE=VAL(MID$(H$(CT),1,2))
1710 IF PFILE=FLE THEN GOTO 1730
1711 CLOSE #2
1712 OPEN "B:"+N$(FLE)+".bst" AS #2 LEN=512
1715 IF LOF(2)=0 THEN CLOSE #2: KILL "B:"+N$(FLE)+".bst": LOCATE 25,1: BEEP: COL
OR 0,7: PRINT " Insert Disk with file ";N$(FLE);". Hit RETURN when ready ": IN
PUT: " ",DUD$: LOCATE 25,1: COLOR 7,0: PRINT SPACE$(79); LOCATE 15,1: GOTO 1712
1720 FIELD #2,2 AS C$,2 AS Y$,5 AS S$,75 AS A$,160 AS T$,110 AS U$,158 AS I$
1730 LET CODEZ=VAL(MID$(H$(CT),3,3)): GOSUB 3460: IF FLG=0 THEN GOTO 1761
1755 LET PFILE=FLE: LET ECT=ECT+1
1760 NEXT CT
1761 RETURN
1763 CLOSE #2: LSET C2$=STRING$(1,0): LSET T2$=STRING$(1,0)
1765 PUT #3
1770 CLOSE: LET T4=1

```



```

1780 CLS: PRINT: PRINT: PRINT ECT;"entries were printed to file ";OWT$;". "
1790 RETURN
1800 LET STACK(TOP)=R
1810 LET STACK(TOP+1)=R0
1815 LET R0=L-1
1820 LET TOP=TOP+2
1830 RETURN
1840 LET R0=STACK(TOP-1)
1850 LET R=STACK(TOP-2)
1860 LET TOP=TOP-2
1870 RETURN
1880 PRINT: PRINT: PRINT: PRINT "Enter the author's name whose entries"
1885 LINE INPUT "you wish to delete:",NAM$
1886 IF NAM$="" THEN CLS: BEEP: PRINT: PRINT "Delete aborted!": PRINT: GOTO 194
1887 LET X$=NAM$
1890 LET A1=75: GOSUB 950: LET FD2=0
1900 FOR CT=1 TO K
1905 IF H$(CT)="GO" THEN GOTO 1920
1910 IF INSTR(1,MID$(H$(CT),30,75),X$)>0 THEN LET H$(CT)="GO": LET FD2=FD2+1
1920 NEXT CT
1930 CLS: PRINT: PRINT: PRINT FD2;"entries were found and deleted which correspo
nded to ";NAM$;". "
1935 LET FD=FD-FD2
1940 RETURN
2000 BEEP: PRINT "BAD SOURCE FILE: ";N$(J): LET N$(J)="": FOR CT=1 TO 350: LET D
UD$="": NEXT CT: RETURN
2010 LET ASP=INSTR(X2+1,X$," and ")
2016 IF ASP=0 THEN RETURN
2020 IF MID$(X$,X2+1,ASP-X2-1)<>SPACE$(ASP-X2-1) THEN RETURN
2030 LET X2=ASP+3
2040 RETURN
2050 CLS: LET CHCE$="": LET PFILE=0: PRINT: PRINT: PRINT "Would you like to view
": PRINT
2055 IF FD>0 THEN PRINT SPC(4);"1 -> All entries in CURRENT working list"
2060 IF FD>0 THEN PRINT SPC(4);"2 -> A particular entry or group of entries from
": PRINT SPC(10);"CURRENT working list"
2065 PRINT SPC(4);"3 -> All entries from one of the source files (original entri
es)": PRINT SPC(4);"4 -> None (return)"
2070 PRINT: INPUT "View:",VW
2080 IF (VW<1) OR (VW>4) THEN BEEP: PRINT "BAD INPUT!"; GOTO 2070
2085 IF (FD<1) AND (VW<3) THEN BEEP: PRINT "NO WORKING ENTRIES TO VIEW!"; GOTO
2070
2090 ON VW GOTO 2120,2100,2110,2220
2100 CLS: GOSUB 1310: IF SEL$<>"E" THEN PRINT: PRINT: INPUT "<HIT RETURN>",DUD$:
GOTO 2120 ELSE GOTO 2220
2110 GOSUB 2300: IF FIEL=0 THEN GOTO 2220 ELSE GOTO 2210
2120 LET PLC=0
2125 FOR CT=1 TO K
2130 IF H$(CT)="GO" THEN GOTO 2200
2140 LET PLC=PLC+1: LET UP(PLC,1)=VAL(MID$(H$(CT),1,2)): LET UP(PLC,2)=VAL(MID$(
H$(CT),3,3)): LET UP(PLC,3)=CT
2200 NEXT CT
2210 GOSUB 2620
2220 CLOSE #3: RETURN
2300 CLS: PRINT: PRINT
2310 PRINT "File list: 0 -> TO EXIT": LET NUMB=1
2320 FOR CT=1 TO T
2330 IF (N$(CT)="") OR (N$(CT)="DISK") THEN GOTO 2360
2340 PRINT SPC(13);NUMB;"-> ";N$(CT)
2350 LET NUMB=NUMB+1
2360 NEXT CT
2370 PRINT: PRINT: INPUT "File #";FIEL
2380 IF (FIEL<0) OR (FIEL>=NUMB) THEN BEEP: PRINT "BAD INPUT!"; GOTO 2370
2390 IF FIEL=0 THEN GOTO 2610
2400 LET NUMC=0
2410 FOR CT=1 TO T
2420 IF (N$(CT)="") OR (N$(CT)="DISK") THEN GOTO 2440
2430 LET NUMC=NUMC+1: IF NUMC=FIEL THEN LET NUMC=CT: GOTO 2450
2440 NEXT CT
2450 OPEN "B:"+N$(NUMC)+".bst" AS #3 LEN=512

```

BIBSRT - 8/31/84 (cont'd).

```

2455 IF LOF(3)=0 THEN CLOSE #3: KILL "B:"+N$(NUMC)+".bst": PRINT: COLOR 0,7: BEE
P: PRINT " File ";N$(NUMC);" not found on this disk. ": INPUT " Insert correct d
isk in drive B and hit RETURN ",DUD$: COLOR 7,0: GOTO 2450
2460 FIELD #3,2 AS C$,2 AS Y$,5 AS S$,75 AS A$,160 AS T$,110 AS U$,158 AS I$
2470 GET #3: LET PLC=0: LET PFILE=NUMC
2480 GET #3
2490 IF (ASC(C$)=0) AND (ASC(T$)=0) THEN GOTO 2610
2500 LET PLC=PLC+1: LET UP(PLC,1)=NUMC: LET UP(PLC,2)=PLC+1
2600 GOTO 2480
2610 RETURN
2620 CLS: IF PLC>0 THEN LET NUMR=1 ELSE LOCATE 8,1: PRINT "No entries to view!":
LOCATE 14,1: INPUT "<HIT RETURN>",DUD$: GOTO 2680
2630 IF INT(NUMR/2)=NUMR/2 THEN GOSUB 2700: GOTO 2660
2640 LET CPOS=1: CLS
2650 GOSUB 2870
2660 LET NUMR=NUMR+1: IF NUMR<=PLC THEN GOTO 2630
2670 IF (INT(PLC/2)<>PLC/2) AND (CHCE$<>"S") THEN GOSUB 2710: LET NUMR=NUMR+1: I
F NUMR<=PLC THEN GOTO 2630
2680 RETURN
2700 LET CPOS=12: GOSUB 2870
2710 LOCATE 24,1: COLOR 15,0: PRINT "ENTER:";SPC(7);: COLOR 0,7: PRINT " RETURN
": COLOR 15,0: PRINT " to continue";: PRINT SPC(10);: COLOR 0,7: PRINT " # ":
COLOR 15,0: PRINT " to review from specific entry";
2715 LOCATE 25,14: COLOR 0,7: PRINT " #E ": COLOR 15,0: PRINT " to edit entry";
: PRINT SPC(12);: COLOR 0,7: PRINT " S ": COLOR 15,0: PRINT " to stop";
2720 LOCATE 24,7: COLOR 7,0: PRINT SPACE$(7);: LOCATE 24,7: INPUT;"",CHCE$
2730 IF CHCE$="" THEN GOTO 2860
2740 IF (ASC(CHCE$)>48) AND (ASC(CHCE$)<58) THEN GOTO 2780
2750 IF (CHCE$<>"S") AND (CHCE$<>"s") THEN BEEP: GOTO 2720
2760 LET NUMR=PLC+1: LET CHCE$="S": GOTO 2860
2780 LET POSS=INSTR(1,CHCE$,"E")
2785 IF POSS=0 THEN LET POSS=INSTR(1,CHCE$,"e")
2786 IF POSS=0 THEN LET POSS=LEN(CHCE$)+1: GOTO 2795
2787 IF POSS<>LEN(CHCE$) THEN BEEP: GOTO 2720
2795 LET NUMR=VAL(MID$(CHCE$,1,POSS-1))
2800 IF (NUMR<1) OR (NUMR>PLC) THEN BEEP: GOTO 2720
2810 IF POSS=LEN(CHCE$) THEN LET CPOS=4: CLS: GOSUB 2870: GOSUB 3050
2820 IF INT(NUMR/2)=NUMR/2 THEN LET NUMR=NUMR-2 ELSE LET NUMR=NUMR-1
2860 RETURN
2870 LOCATE CPOS,1: LET FLE=UP(NUMR,1): LET CODE%=UP(NUMR,2): LET TK=UP(NUMR,3)
2880 IF FLE=PFILE THEN GOTO 2910 ELSE LET PFILE=FLE: CLOSE #3
2890 OPEN "B:"+N$(FLE)+".bst" AS #3 LEN=512
2895 IF LOF(3)=0 THEN CLOSE #3: KILL "B:"+N$(FLE)+".bst": LOCATE 25,1: BEEP: COL
OR 0,7: PRINT " Insert Disk with file ";N$(FLE);". Hit RETURN when ready ": IN
PUT; "",DUD$: LOCATE 25,1: COLOR 7,0: PRINT SPACE$(79);: LOCATE CPOS,1: GOTO 289
0
2900 FIELD #3,2 AS C$,2 AS Y$,5 AS S$,75 AS A$, 160 AS T$,110 AS U$,158 AS I$
2910 GET #3,CODE%
2915 COLOR 15,0: PRINT "ENTRY #";MID$(STR$(NUMR),2,LEN(STR$(NUMR))-1): COLOR 7,0

2920 PRINT "CATEGORY:";C$;"->";: COLOR 7,0: LET X$=M$(VAL(C$)): GOSUB 2990: PRIN
1 X$;: LOCATE CSRLIN,59
2930 PRINT "YEAR:19";Y$;: LOCATE CSRLIN,70: PRINT "CODE:";S$
2940 LET X$=A$: GOSUB 2990: LOCATE CPOS+2,1: PRINT "AUTHOR: "+X$
2950 LET X$=T$: GOSUB 2990: LOCATE CPOS+3,1: PRINT "TITLE: "+X$
2960 LET X$=U$: GOSUB 2990: LOCATE CPOS+6,1: PRINT "SOURCE: "+X$
2970 LET X$=I$: GOSUB 2990: LOCATE CPOS+8,1: PRINT "ABSTRACT: "+X$
2980 RETURN
2990 LET POSS=-1
3000 LET POSS=INSTR(POSS+2,X$," ")
3010 IF POSS=0 THEN GOTO 3040
3020 IF MID$(X$,POSS,LEN(X$)-POSS)<>SPACE$(LEN(X$)-POSS) THEN GOTO 3000
3030 LET X$=MID$(X$,1,POSS)
3040 RETURN
3050 LET HAP=0: LOCATE 15,1: COLOR 15,0: PRINT "Which field to edit:": COLOR 7,
0: PRINT SPC(6);"0 -> ": COLOR 15,0: PRINT "Quit WITHOUT Saving Changes": COLOR
7,0: PRINT SPC(26);"1 -> Category"
3060 PRINT SPC(26);"2 -> Year": PRINT SPC(26);"3 -> Code": PRINT SPC(26);"4 -> A
uthor": PRINT SPC(26);"5 -> Title"
3070 PRINT SPC(26);"6 -> Source": PRINT SPC(26);"7 -> Abstract": PRINT SPC(26);"
8 -> ": COLOR 15,0: PRINT "STOP and SAVE Changes": COLOR 7,0

```

```

3080 LET FLG=0: LOCATE 15,21: PRINT SPACE$(5);: LOCATE 15,21: INPUT; "",EDT$: IF
  EDT$="0" THEN GOTO 3200 ELSE LET ED=VAL(EDT$)
3090 IF (ED<1) OR (ED>8) THEN BEEP: GOTO 3080
3100 IF ED=8 THEN GOTO 3190
3105 LOCATE 25,5: COLOR 15,0: PRINT " TYPE ";: COLOR 0,7: PRINT " XX ";: COLOR 1
  5,0: PRINT " TO CANCEL EDIT OF FIELD";ED;: COLOR 7,0
3110 LET HAP=HAP+1: ON ED GOTO 3120,3130,3140,3150,3160,3170,3180
3120 LET FLG=0: LOCATE 5,10: LINE INPUT; "",CHNG$: IF (CHNG$="XX") OR (CHNG$="xx
  ") THEN LET HAP=HAP-1: LOCATE 5,10: PRINT SPACE$(2);: LOCATE 5,10: PRINT C$: GOT
  O 3080
3125 GOSUB 3210: IF FLG=1 THEN BEEP: GOTO 3120 ELSE LSET C$=CHNG$: GOTO 3080
3130 LET FLG=0: LOCATE 5,66: LINE INPUT; "",CHNG$: IF (CHNG$="XX") OR (CHNG$="xx
  ") THEN LET HAP=HAP-1: LOCATE 5,66: PRINT SPACE$(4);: LOCATE 5,66: PRINT Y$: GOT
  O 3080
3135 GOSUB 3250: IF FLG=1 THEN BEEP: GOTO 3130 ELSE LSET Y$=CHNG$: GOTO 3080
3140 LET FLG=0: LOCATE 5,75: LINE INPUT; "",CHNG$: IF (CHNG$="XX") OR (CHNG$="xx
  ") THEN LET HAP=HAP-1: LOCATE 5,75: PRINT SPACE$(2);: LOCATE 5,75: PRINT S$: GOT
  O 3080
3145 IF LEN(CHNG$)>5 THEN BEEP: GOTO 3140
3146 IF (CHNG$="") OR (CHNG$=SPACE$(LEN(CHNG$))) THEN LET CHNG$=STRING$(1,127):
  LOCATE 5,75: PRINT CHNG$+SPACE$(4)
3147 LSET S$=CHNG$: GOTO 3080
3150 LOCATE 6,9: LINE INPUT; "",CHNG$: IF (CHNG$="XX") OR (CHNG$="xx") THEN LET
  HAP=HAP-1: LOCATE 6,9: PRINT SPACE$(2);: LET X$=A$: GOSUB 2990: LOCATE 6,1: PRIN
  T "AUTHOR: "+X$: GOTO 3080
3152 IF (CHNG$="") OR (CHNG$=SPACE$(LEN(CHNG$))) THEN LET CHNG$=STRING$(1,127)
3155 LSET A$=CHNG$: GOTO 3080
3160 LOCATE 7,8: LINE INPUT; "",CHNG$: IF (CHNG$="XX") OR (CHNG$="xx") THEN LET
  HAP=HAP-1: LOCATE 7,8: PRINT SPACE$(2);: LET X$=T$: GOSUB 2990: LOCATE 7,1: PRIN
  T "TITLE: "+X$: GOTO 3080
3162 IF (CHNG$="") OR (CHNG$=SPACE$(LEN(CHNG$))) THEN LET CHNG$=STRING$(1,127)
3165 LSET T$=CHNG$: GOTO 3080
3170 LOCATE 10,9: LINE INPUT; "",CHNG$: IF (CHNG$="XX") OR (CHNG$="xx") THEN LET
  HAP=HAP-1: LOCATE 10,9: PRINT SPACE$(2);: LET X$=U$: GOSUB 2990: LOCATE 10,1: P
  RINT "SOURCE: "+X$: GOTO 3080
3172 IF (CHNG$="") OR (CHNG$=SPACE$(LEN(CHNG$))) THEN LET CHNG$=STRING$(1,127)
3175 LSET U$=CHNG$: GOTO 3080
3180 LOCATE 12,11: LINE INPUT; "",CHNG$: IF (CHNG$="XX") OR (CHNG$="xx") THEN LE
  T HAP=HAP-1: LOCATE 12,11: PRINT SPACE$(2);: LET X$=I$: GOSUB 2990: LOCATE 12,1:
  PRINT "ABSTRACT: "+X$: GOTO 3080
3182 IF (CHNG$="") OR (CHNG$=SPACE$(LEN(CHNG$))) THEN LET CHNG$=STRING$(1,127)
3185 LSET I$=CHNG$: GOTO 3080
3190 IF HAP>0 THEN PUT #3,CODEX: IF VW<>3 THEN LET PL=CODEX: LET J=FLE: GOSUB 64
  0
3200 RETURN
3210 IF (CHNG$="") OR (CHNG$=SPACE$(LEN(CHNG$))) THEN LET CHNG$=STRING$(1,127):
  LET X$=" ": LOCATE 5,10: PRINT CHNG$;: GOTO 3235
3215 IF VAL(CHNG$)<1 THEN LET FLG=1: GOTO 3240
3220 IF VAL(CHNG$)>M THEN LET FLG=1: GOTO 3240
3230 LET X$=M$(VAL(CHNG$)): GOSUB 2990
3235 LOCATE 5,14: PRINT SPACE$(45): LOCATE 5,11: PRINT " ->";X$
3240 RETURN
3250 IF (CHNG$="") OR (CHNG$=SPACE$(LEN(CHNG$))) THEN LET CHNG$=STRING$(1,127):
  LOCATE 5,66: PRINT CHNG$+SPACE$(3): GOTO 3270
3255 IF LEN(CHNG$)<>2 THEN LET FLG=1: GOTO 3270
3260 IF VAL(CHNG$)=0 THEN LET FLG=1: GOTO 3270
3270 RETURN
3280 LET N$(J)="DISK": IF T>J THEN LET DSKFLG=1 ELSE GOTO 3290
3285 LET XPL=CSRLIN: LOCATE 25,1: FOR BB=1 TO 10: BEEP: NEXT BB: COLOR 0,7: INPU
  T; " Insert new disk in drive B, then hit RETURN ",DUD$: COLOR 7,0: LOCATE XPL,1
3290 RETURN
3300 LET XPL=CSRLIN: LET YPL=POS(0)
3305 IF (ERR=67) AND (ERL=3417) THEN RESUME 3600
3310 IF ERR=64 THEN LET MSG$="Improper Filename! Hit RETURN and Try Again.": GO
  SUB 3380: RESUME 340
3315 IF ERR=61 THEN RESUME 3610
3320 IF ERR<>9 THEN GOTO 3340
3330 IF ERL<460 THEN LET MSG$="Too many source files! Hit RETURN to continue.":
  LET T=T-1: GOSUB 3380: RESUME 385 ELSE LET MSG$="Too many entries! Hit RETURN
  to continue.": LET K=K-1: GOSUB 3380: LET J=T: RESUME 710

```

```

3340 IF (ERR>13) AND (ERR<17) THEN LET MSG$="Input Too Long! Hit return and try
again": GOSUB 3380: RESUME 0
3350 IF ERR<>71 THEN GOTO 3355 ELSE LET MSG$="Insert Disk into Drive "
3351 IF (DSKFLG=1) AND ((ERL>1761) AND (ERL<1790)) OR ((ERL>3455) AND (ERL<3480
))) THEN LET MSG$="Make sure disks are in both Drives A and B! Hit RETURN": GO
SUB 3380: GOTO 3370
3352 IF ((ERL<3480) OR (ERL>3580)) AND (ERL<>3630) THEN LET MSG$=MSG$+"B" ELSE
LET MSG$=MSG$+"A"
3353 LET MSG$=MSG$+"! Hit RETURN": GOSUB 3380: GOTO 3370
3355 IF ERR=70 THEN LET MSG$="Disk write protected! Insert new disk in DRIVE B.
Hit RETURN": GOSUB 3380: GOTO 3370
3360 LET MSG$="Error #"+STR$(ERR)+" at "+STR$(ERL)+". Hit RETURN to continue.
": GOSUB 3380: LET EFLAG=ERR: RESUME 150
3370 LOCATE XPL,YPL: RESUME 0
3380 LOCATE 25,1: BEEP: BEEP: COLOR 0,7: PRINT " ";MSG$;" ";: COLOR 7,0: INPUT;
"",DUD$: LOCATE 25,1: PRINT SPACE$(79);: RETURN
3400 LET RTFL=1: LET FSPT=17: KEY(1) ON: LOCATE 12,1: INPUT; "Name for OUTPUT fi
le (Hit RETURN to abort)":OWT$: KEY(1) OFF
3410 IF OWT$="" THEN LET FLG=0: GOTO 3455
3415 IF (LEN(OWT$)>8) OR (INSTR(1,OWT$,".")>0) THEN BEEP: LOCATE 14,1: PRINT "Ba
d filename!": GOSUB 3690: GOTO 3400
3420 OPEN "B:"+OWT$+".bst" AS #3 LEN=512
3422 FIELD #3,2 AS C2$,2 AS Y2$,5 AS S2$,75 AS A2$,160 AS T2$,110 AS U2$,158 AS
I2$
3430 IF LOF(3)=0 THEN GOTO 3454
3440 LOCATE 14,1: INPUT; "Erase file (enter Y for YES)":ANS$
3450 IF (ANS$<>"Y") AND (ANS$<>"y") THEN GOSUB 3650: GOTO 3455
3452 CLOSE #3: KILL "B:"+OWT$: OPEN "B:"+OWT$ AS #3 LEN=512
3453 FIELD #3,2 AS C2$,2 AS Y2$,5 AS S2$,75 AS A2$,160 AS T2$,110 AS U2$,158 AS
I2$
3454 LSET C2$="*^": LSET T2$="~!pz)": PUT #3
3455 RETURN
3460 GET #2,CODE%
3461 LSET C2$=C$: LSET Y2$=Y$: LSET S2$=S$: LSET A2$=A$
3467 LSET T2$=T$: LSET U2$=U$: LSET I2$=I$
3470 PUT #3: RETURN
3480 LOCATE 5,1: COLOR 0,7: PRINT " Insert Bibliography Extension Disk in DRIVE
A ": COLOR 7,0: PRINT: INPUT; "<Type ABORT to stop; Hit RETURN to continue>";DUD
$
3485 IF (DUD$="ABORT") OR (DUD$="abort") THEN GOSUB 530: GOTO 3580
3490 OPEN "help.dat" AS #3: IF LOF(3)=0 THEN CLOSE #3: KILL "help.dat": BEEP: BE
EP: BEEP: GOTO 3480
3500 CLOSE #3: OPEN "out.dat" AS #3 LEN=512
3505 FIELD #3,2 AS C2$,2 AS Y2$,5 AS S2$,75 AS A2$,160 AS T2$,110 AS U2$,158 AS
I2$
3510 GOSUB 1680
3520 LOCATE 10,1: COLOR 0,7: PRINT " Insert disk for OUTPUT file in Drive B. Hi
t RETURN when ready. ":: COLOR 7,0: INPUT; "",DUD$
3522 CLOSE: OPEN "out.dat" AS #2 LEN=512: GOSUB 3400: IF FLG=0 THEN GOSUB 530: G
OTO 3580
3525 LET ECT2=ECT: LET ECT=0
3530 FOR CODE%=1 TO ECT2
3540 GOSUB 3460: IF FLG<>0 THEN LET ECT=ECT+1 ELSE GOSUB 530: GOTO 3580
3550 NEXT CODE%
3555 GOSUB 1763
3560 LOCATE 6,1: COLOR 0,7: PRINT " Re-insert Bibliography Program disk in DRIVE
A ": PRINT: COLOR 7,0: INPUT "Hit RETURN when ready";DUD$: CLS
3570 OPEN "DRIVER.BAS" AS #3: IF LOF(3)=0 THEN CLOSE #3: KILL "DRIVER.BAS": BEEP
: BEEP: BEEP: GOTO 3560
3580 CLOSE: RETURN
3600 LET MSG$="No room on data disk for output!": IF DSKFLG=1 THEN LET MSG$=ME
SG$+" Insert new disk. Hit RETURN": GOSUB 3380: GOTO 3400 ELSE LET MSG$=MSG$+"
Hit Return": GOSUB 3380: CLS: LET DSKFLG=1: GOSUB 3480: LET DSKFLG=0: RETURN 1
679
3610 LET STACK(TOP)=ERL: LET TOP=TOP+1: LET MSG$="Data disk full! Hit RETURN":
GOSUB 3380: CLS: LOCATE 3,1: IF ECT<1 THEN KILL "B:"+OWT$: PRINT "Output file "
;OWT$;" not created on DATA Disk in Drive B.": IF ERL<>3454 THEN LET CODE%=CODE%
+1
3612 GOTO 3630
3615 PRINT ECT-1;"entries were printed to file ";OWT$;"."

```

BIBSRT - 8/31/84 (cont'd).

```

3620 OPEN "b:"+OWT$+".bst" AS #3 LEN=512: FIELD #3,2 AS C2$,2 AS Y2$,5 AS S2$,75
    AS A2$,160 AS T2$,110 AS U2$,158 AS I2$: LSET C2$=STRING$(1,0): LSET T2$=STRING
$(1,0): PUT #3,ECT+1: CLOSE #3
3625 IF DSKFLG<>1 THEN GOTO 3640
3630 PRINT: COLOR 0,7: PRINT " Insert new DATA disk in DRIVE B ": COLOR 7,0: PRI
NT: INPUT "<Hit RETURN when ready>":DUD$: LET ECT=0: OPEN "out.dat" AS #2 LEN=51
2: GOSUB 3400: LET FERL=STACK(TOP-1): LET TOP=TOP-1
3635 IF (FLG<>0) AND (FERL<>3454) THEN LET CODE%=CODE%-1: GOTO 3460 ELSE RETURN
3640 LET PFILE=0: LET BEG=CT-1: LET DSKFLG=1: GOSUB 3480: LET FERL=STACK(TOP-1):
    LET TOP=TOP-1: LET DSKFLG=0: IF FERL<>3454 THEN LET FLG=0 ELSE LET FLG=2
3645 RETURN
3650 LOCATE 15,1: INPUT: "Append to Data file (enter Y for YES)":ANS$
3660 IF (ANS$<>"Y") AND (ANS$<>"y") THEN GOSUB 3690: RETURN 3400
3665 GET #3
3670 IF (C2$<>"*^") OR (T2$<>"~!pz")+SPACE$(154)) THEN BEEP: LOCATE 20,1: PRINT
    OWT$:"is not a Data file.": GOSUB 3690: RETURN 3400
3675 LET APP%=LOF(3)/512-1: IF APP%>=500 THEN BEEP: LOCATE 20,1: PRINT "Cannot a
ppend to file ";OWT$:".": GOSUB 3690: RETURN 3400
3680 LOCATE 20,1: PRINT APP%-1;" entries already exist in file ";OWT$:".": GET
    #3,APP%: RETURN
3690 LOCATE 12,44: PRINT SPACE$(37);SPACE$(LEN(OWT$)): CLOSE #3: RETURN
4000 LOCATE FSPT,20: FILES "b:*.bst"
4005 IF RTFL=0 THEN RETURN 340 ELSE RETURN 3400

```

PRINTER - 10/31/84

```

70 LET EFLAG=0: LET FINM$="PRINTER": ON ERROR GOTO 1490: ON KEY(1) GOSUB 2100: K
EY(1) OFF: ON KEY(2) GOSUB 1600
80 GOSUB 1360: CLS: GOSUB 690: IF DST<3 THEN LOCATE 14,1: COLOR 0,7: PRINT " Pos
ition Paper at Top of Form and Turn Printer On. Hit RETURN ": COLOR 7,0: INPUT
    : "",DUD$
85 IF DST>1 THEN OPEN "output.dsn" FOR OUTPUT AS #3
90 GOSUB 1610
95 CLS: PRINT: PRINT: PRINT
100 PRINT: PRINT "Enter the file name that you want to print in formatted form"
110 PRINT "on the printer (hit RETURN when done)":
120 KEY(1) ON: INPUT NAM$: KEY(1) OFF: IF NAM$="" THEN GOTO 330
125 IF (LEN(NAM$)>8) OR (INSTR(1,NAM$,".")>0) THEN GOSUB 680: GOTO 95
130 OPEN "B:"+NAM$+".bst" AS #1 LEN=512
140 IF LOF(1)=0 THEN GOSUB 680: KILL "b:"+NAM$+".bst": GOTO 95
150 FIELD #1,2 AS C$,2 AS Y$,5 AS S$,75 AS A$,160 AS T$,110 AS U$,158 AS I$
160 GET #1: IF (C$<>"*^") AND (T$<>"~!pz") THEN GOSUB 680: GOTO 95
170 LET PFLG=1
171 IF DST<3 THEN LPRINT CHR$(27);CHR$(64);
172 GOSUB 1860: GET #1: GOTO 212
176 GET #1
180 IF (ASC(C$)=0) AND (ASC(T$)=0) THEN GOTO 325
190 FOR J=1 TO SP
200 LET SNG$(J)=" "
210 NEXT J
211 LET LNE=SP+1
212 IF (ANS$="Y") OR (ANS$="y") THEN GOSUB 940
215 LET SNG$(LNE)=SPACE$(5): LET CNTR=5
220 IF MID$(A$,1,1)=STRING$(1,127) THEN GOTO 245
225 LET X$=A$: GOSUB 500: GOSUB 605: LET H$=X$
230 IF MID$(X$,LEN(X$),1)<> "." THEN LET SNG$(LNE)=SNG$(LNE)+".": LET CNTR=CNTR+1

240 IF CNTR<>0 THEN LET SNG$(LNE)=SNG$(LNE)+SPACE$(2): LET CNTR=CNTR+2
245 IF MID$(Y$,1,1)=STRING$(1,127) THEN GOTO 263N GOTO 263
250 LET X$="(19"+Y$+")": GOSUB 605
260 IF CNTR<>0 THEN LET SNG$(LNE)=SNG$(LNE)+SPACE$(2): LET CNTR=CNTR+2
263 IF MID$(T$,1,1)=STRING$(1,127) THEN GOTO 278
265 LET X$=T$: GOSUB 500: GOSUB 605
270 IF MID$(X$,LEN(X$),1)<> "." THEN LET SNG$(LNE)=SNG$(LNE)+".": LET CNTR=CNTR+1

```

```

275 IF CNTR<>0 THEN LET SNG$(LNE)=SNG$(LNE)+SPACE$(2): LET CNTR=CNTR+2
278 IF MID$(U$,1,1)=STRING$(1,127) THEN GOTO 290
280 LET X$=U$: GOSUB 500: GOSUB 605
285 IF MID$(X$,LEN(X$),1)<>"," THEN LET SNG$(LNE)=SNG$(LNE)+","
290 IF (ABCT$="Y") OR (ABCT$="y") THEN GOSUB 560
300 GOSUB 1030: IF (IND$="Y") OR (IND$="y") THEN GOSUB 1100
320 GOTO 176
325 CLOSE #1: GOTO 95
330 IF ((IND$="Y") OR (IND$="y")) AND (PFLG<>0) THEN GOSUB 1230
370 IF PFLG<>0 THEN GOSUB 1650: IF DST<3 THEN LPRINT CHR$(27);CHR$(64)
372 KEY(2) OFF: IF (DST>1) AND (PFLG<>0) THEN GOSUB 2000
375 CLOSE: COMMON EFLAG,FINM$: CHAIN "DRIVER": END
500 LET PLC=0
510 LET PLC=INSTR(PLC+1,X$," ")
520 IF (PLC<>0) AND (MID$(X$,PLC+1,LEN(X$)-PLC)<>SPACE$(LEN(X$)-PLC)) THEN GOTO
510
530 IF PLC<>0 THEN LET X$=MID$(X$,1,PLC-1)
540 RETURN
560 IF CNTR<>0 THEN LET LNE=LNE+1
565 LET SNG$(LNE)=" ": LET LNE=LNE+1
570 IF MID$(I$,1,1)=STRING$(1,127) THEN GOTO 600
580 LET CNTR=0: LET X$=I$: GOSUB 500: GOSUB 605
590 IF CNTR<>0 THEN LET LNE=LNE+1
600 LET SNG$(LNE)=" ": LET LNE=LNE+1: RETURN
605 LET ST=1: LET OPLC=0: LET LGTH=LEN(X$): LET K=LGTH
610 IF K+CNTR<CPL THEN LET CNTR=K+CNTR: GOTO 660
620 LET PLC=INSTR(OPLC+1,X$," ")
630 IF (PLC<>0) AND (PLC+CNTR-ST+1<CPL) THEN LET OPLC=PLC: GOTO 620
640 LET SNG$(LNE)=SNG$(LNE)+MID$(X$,ST,OPLC-ST+1): LET K=LGTH-OPLC: LET CNTR=0:
LET LNE=LNE+1
650 LET ST=OPLC+1: GOTO 610
660 LET SNG$(LNE)=SNG$(LNE)+MID$(X$,ST,K)
670 RETURN
680 BEEP: PRINT: PRINT: PRINT "BAD FILE: ";NAM$: CLOSE #1: PRINT: PRINT: INPUT "
<HIT RETURN>":DUM$: CLS: RETURN
690 PRINT: PRINT: INPUT "Do you want category headings printed (enter Y or N)";A
NS$
700 IF (ANS$="Y") OR (ANS$="y") THEN GOSUB 780 ELSE GOTO 755
710 IF OPT<0 THEN GOTO 750
720 IF INT(OPT/3)=OPT/3 THEN LET ANS$="N": CLS: PRINT: PRINT: GOTO 755
730 IF INT(OPT/2)=OPT/2 THEN GOTO 700
740 CLS: BEEP: PRINT: PRINT: PRINT: PRINT "PROGRAM ABORTED!": STOP
750 GOSUB 890
755 INPUT "Do you want to include an abstract for each of the entries (enter Y o
r N)";ABCT$
757 INPUT "Do you want to include an index (enter Y or N)";IND$
760 PRINT: INPUT "How many spaces between entries";SP
763 PRINT
765 INPUT: "Destination of output (P for printer, F for file, B for both)";DTN$
766 IF (DTN$="P") OR (DTN$="p") THEN LET DST=1: GOTO 770
767 IF (DTN$="F") OR (DTN$="f") THEN LET DST=3: GOTO 770
768 IF (DTN$="B") OR (DTN$="b") THEN LET DST=2: GOTO 770
769 LOCATE CSRLIN,1: PRINT SPACE$(78); LOCATE CSRLIN,1: GOTO 765
770 RETURN
780 OPEN "B:CAT.DAT" AS #2 LEN=45
790 IF LOF(2)>0 THEN LET OPT=-1: GOTO 880
800 BEEP: CLOSE #2: KILL "B:CAT.DAT": CLS: PRINT: PRINT: PRINT "NO CATEGORY FILE
AVAILABLE ON DISK IN DRIVE B!"
810 PRINT: PRINT "Options: ";SPC(4); "Abort -> stop program"
820 PRINT SPC(12); "Re-try -> insert another disk in drive B"
830 PRINT SPC(12); "Ignore -> proceed without printing category headings"
840 PRINT: INPUT "OPTION: ",OPT$
850 LET OPT$=MID$(OPT$,1,1)
860 LET OPT=INSTR(1,"ARirai",OPT$): IF OPT<>0 THEN GOTO 880
870 BEEP: PRINT "Bad Input! "; GOTO 840
880 RETURN
890 FIELD #2, 45 AS CAT$
895 LET M=0
900 GET #2
910 IF ASC(CAT$)=0 THEN GOTO 930
920 LET M=M+1: GOTO 900

```

PRINTER - 10/31/84 (cont'd).

```
930 LET OLCAT$="": RETURN
940 IF (MID$(C$,1,1)=STRING$(1,127)) OR (VAL(C$)>M) THEN LET NCAT$="OTHER": GOTO
980
950 LET CODE%=VAL(C$)
960 GET #2, CODE%
970 LET NCAT$=CAT$
980 IF NCAT$<>OLCAT$ THEN GOSUB 1000: LET OLCAT$=NCAT$
990 RETURN
1000 LET X$=NCAT$: GOSUB 500: LET SPOT=INT(LEN(X$)/2)
1005 LET SNG$(LNE)=" "
1010 LET SNG$(LNE+1)=SPACE$(INT(CPL/2)-SPOT)+CHR$(27)+CHR$(45)+CHR$(1)+X$+CHR$(2
7)+CHR$(45)+CHR$(0): LET SNG$(LNE+2)=" ": LET SNG$(LNE+3)=" ": LET LNE=LNE+4
1020 RETURN
1030 LET FRL=1: IF LNE+CNL<=NL THEN GOTO 1050
1040 GOSUB 1650: GOSUB 1610: LET CNL=0: IF INIT=0 THEN LET FRL=SP+1
1050 FOR J=FRL TO LNE
1060 IF DST<3 THEN LPRINT TAB(LMG);SNG$(J)
1062 IF DST>1 THEN PRINT #3,SPACE$(LMG);SNG$(J)
1065 LET SNG$(J)=" "
1070 NEXT J
1080 LET CNL=CNL+LNE+CRCT-FRL+1
1090 RETURN
1100 LET SPT=0: LET ADD$=MID$(STR$(PG),2,LEN(STR$(PG))-1)+", "
1105 GOSUB 1200
1110 LET PNTER=ASC(H1$)-64
1120 IF HEAD(PNTER,1)=0 THEN LET HEAD(PNTER,2)=TOP: GOTO 1165 ELSE LET NXT=HEAD(
PNTER,2)
1130 IF INDEX$(NXT,1)>H1$ THEN LET HEAD(PNTER,2)=TOP: LET NIXT(TOP)=NXT: GOTO 11
65
1132 LET ONXT=NXT: IF H1$=INDEX$(NXT,1) THEN GOSUB 1320: GOTO 1180
1135 LET NXT=NIXT(ONXT)
1140 IF NXT=0 THEN LET NIXT(ONXT)=TOP: GOTO 1165
1150 IF INDEX$(NXT,1)>H1$ THEN LET NIXT(ONXT)=TOP: LET NIXT(TOP)=NXT: GOTO 1165
1160 GOTO 1132
1165 LET INDEX$(TOP,1)=H1$: LET INDEX$(TOP,2)=ADD$
1175 LET HEAD(PNTER,1)=HEAD(PNTER,1)+1: LET TOP=TOP+1
1180 IF NSPT<=LEN(H$) THEN IF MID$(H$,NSPT,1)="," THEN LET SPT=NSPT+1: GOTO 1105
ELSE LET SPT=NSPT+4: GOTO 1105
1190 RETURN
1200 LET NSPT=INSTR(SPT+1,H$,".",")+1
1210 IF NSPT<2 THEN LET NSPT=INSTR(SPT+1,H$," and "): IF NSPT=0 THEN LET NSPT=LE
N(H$)+1
1220 LET H1$=MID$(H$,SPT+1,NSPT-SPT-1): RETURN
1230 GOSUB 1650: GOSUB 1690: GOSUB 1860: LET LNE=1: GOSUB 1610: LET INIT=1
1240 IF DST<3 THEN LPRINT TAB(36);"INDEX"
1242 IF DST>1 THEN PRINT #3,SPACE$(36);"INDEX"
1244 FOR J=1 TO 3
1245 IF DST<3 THEN LPRINT
1246 IF DST>1 THEN PRINT #3," "
1247 NEXT J
1248 LET LMG=5: LET CRCT=4
1250 FOR JJ=1 TO 26
1255 LET NXT=HEAD(JJ,2)
1260 FOR K=1 TO HEAD(JJ,1)
1262 LET AMNT=LEN(INDEX$(NXT,1))+LEN(INDEX$(NXT,2)): LET DOTS=30-AMNT: IF DOTS<0
THEN PRINT "OH OH!"
1265 IF LNE+2*CRCT>2*NL THEN LET LNE=NL-CRCT: GOSUB 1030: LET LNE=1: LET CRCT=0
: GOTO 1270
1267 IF LNE+CRCT>NL THEN LET SNG$(LNE-NL+CRCT)=SNG$(LNE-NL+CRCT)+SPACE$(8)+INDEX
$(NXT,1)+" "+STRING$(DOTS,46)+MID$(INDEX$(NXT,2),1,LEN(INDEX$(NXT,2))-1): GOTO 1
280
1270 LET SNG$(LNE)=INDEX$(NXT,1)+" "+STRING$(DOTS,46)+MID$(INDEX$(NXT,2),1,LEN(I
NDEX$(NXT,2))-1)
1280 LET NXT=NIXT(NXT): LET LNE=LNE+1
1290 NEXT K
1300 NEXT JJ
1310 GOSUB 1030: RETURN
1320 IF INSTR(1,INDEX$(NXT,2),",",+ADD$)>1 THEN GOTO 1350
1330 IF INSTR(1,INDEX$(NXT,2),ADD$)=1 THEN GOTO 1350
1340 LET INDEX$(NXT,2)=INDEX$(NXT,2)+ADD$
1350 RETURN
```

```

1360 LET CRCT=0: LET LNE=1: LET INIT=0: LET PG=1: LET TOP=1: DIM INDEX$(500,2):
DIM HEAD(26,2): DIM NIXT(500): CLS
1380 COLOR 0,7: PRINT " INITIAL PRINTER SET-UP: "; COLOR 7,0
1382 LET TMG=7: LET BMG=6: LET RMG=10: LET LMG=5
1385 PRINT: PRINT SPC(18);"TOP MARGIN - ";TMG;" lines      "; PRINT SPC(18);"B
OTTOM MARGIN - ";BMG;" lines      "; PRINT SPC(18);"LEFT MARGIN - ";LMG;" space
s      "; PRINT SPC(18);"RIGHT MARGIN - ";RMG;" spaces      "
1387 LET CPL=81-(RMG+LMG): LET NL=66-(TMG+BMG)
1390 LOCATE 13,19: PRINT "Characters/Line - ";CPL-1;"          "; LOCATE 12,19: PR
INT "Lines/Page - ";NL;"          "
1400 LOCATE 9,61: PRINT SPACE$(5);: LOCATE 9,1: INPUT "Do you want to change any
of these settings (enter Y or N)";STT$
1410 IF (STT$<>"Y") AND (STT$<>"y") THEN GOTO 1480
1420 LOCATE 25,1: COLOR 0,7: PRINT " enter -1 to leave the same ";: COLOR 7,0
1430 LOCATE 3,33: INPUT; " ",VLUEx: IF (VLUEx>=66) OR (VLUEx<-1) THEN BEEP: LOCAT
E 3,33: PRINT SPACE$(3);: GOTO 1430
1435 IF VLUEx<>-1 THEN LET TMG=VLUEx
1440 LOCATE 4,36: INPUT; " ",VLUEx: IF (VLUEx>=66-TMG) OR (VLUEx<-1) THEN BEEP: L
OCATE 4,36: PRINT SPACE$(3);: GOTO 1440
1445 IF VLUEx<>-1 THEN LET BMG=VLUEx
1450 LOCATE 5,34: INPUT; " ",VLUEx: IF (VLUEx>=80) OR (VLUEx<-1) THEN BEEP: LOCAT
E 5,34: PRINT SPACE$(3);: GOTO 1450
1455 IF VLUEx<>-1 THEN LET LMG=VLUEx
1460 LOCATE 6,35: INPUT; " ",VLUEx: IF (VLUEx>=80-LMG) OR (VLUEx<-1) THEN BEEP: L
OCATE 6,35: PRINT SPACE$(3);: GOTO 1460
1465 IF VLUEx<>-1 THEN LET RMG=VLUEx
1470 LOCATE 2,1: GOTO 1385
1480 DIM SNG$(NL): GOSUB 1800: LET CNL=0: RETURN
1490 LET XPL=CSRLIN: LET YPL=POS(0)
1495 IF (ERR=25) OR (ERR=27) THEN LET MESS$="Turn on Printer and Hit RETURN.": G
OSUB 1560: GOTO 1550
1500 IF (ERR=64) OR (ERR=67) THEN LET MESS$="Improper Filename! Hit RETURN and T
ry Again.": GOSUB 1560: RESUME 95
1510 IF ERR=9 THEN LET MESS$="More lines in an entry or between entries to fit o
n a page. Hit RETURN.": GOSUB 1560: RESUME 375
1520 IF (ERR>13) AND (ERR<17) THEN LET MESS$="Input Too Long! Hit return and try
again": GOSUB 1560: RESUME 95
1530 IF ERR=71 THEN LET MESS$="Insert Disk into Drive B! Hit RETURN when ready."
: GOSUB 1560: GOTO 1550
1540 LET MESS$="Error #"+STR$(ERR)+" at "+STR$(ERL)+" . Hit RETURN to continue.
": GOSUB 1560: LET EFLAG=ERR: RESUME 375
1550 LOCATE XPL,YPL: RESUME 0
1560 LOCATE 25,1: BEEP: BEEP: COLOR 0,7: PRINT " ";MESS$;" ";: COLOR 7,0: INPUT;
" ",DUD$: LOCATE 25,1: PRINT SPACE$(79);: RETURN
1600 RETURN 375
1610 FOR J=1 TO TMG
1620 IF DST<3 THEN LPRINT
1625 IF DST>1 THEN PRINT #3," "
1630 NEXT J
1640 RETURN
1650 FOR J=1 TO NL-CNL-1+INT(BMG/2)
1660 IF DST<3 THEN LPRINT
1665 IF DST>1 THEN PRINT #3," "
1670 NEXT J
1672 IF DST<3 THEN LPRINT TAB(LMG+INT(CPL/2));PG
1673 IF DST>1 THEN PRINT #3,SPACE$(LMG+INT(CPL/2));PG
1674 LET PG=PG+1: LET CNL=0
1675 FOR J=1 TO INT((BMG+1)/2)
1676 IF DST<3 THEN LPRINT
1677 IF DST>1 THEN PRINT #3," "
1678 NEXT J
1680 RETURN
1690 CLS: LOCATE 3,25: PRINT "PREPARING TO PRINT INDEX";
1700 LOCATE 8,10: PRINT "Top Margin: ";TMG;SPACE$(20);
1710 LOCATE 9,10: PRINT "Bottom Margin: ";BMG;SPACE$(20);
1715 LOCATE 11,10: PRINT "Lines/Page: ";NL;
1720 LOCATE 17,70: PRINT SPACE$(2);: LOCATE 17,1: INPUT; "Change either of these
settings (N for NO, T for TOP, B for BOTTOM)";STT$
1740 LET STT$=MID$(STT$,1,1)
1745 IF (STT$="n") OR (STT$="N") THEN GOTO 1790
1750 IF (STT$<>"T") AND (STT$<>"t") THEN GOTO 1760

```


PRINTER - 10/31/84 (cont'd).

```
1755 LOCATE 8,23: INPUT; "",VLUEx$: LET VLUEx%=VAL(VLUEx$): IF (VLUEx%<1) OR (VLUEx%>=66-BMG) OR (VLUEx%>64) THEN BEEP: GOTO 1755 ELSE LET TMG=VLUEx$: LET NL=66-(TMG+BMG): GOTO 1700
1760 IF (STT$<>"B") AND (STT$<>"b") THEN BEEP: BEEP: GOTO 1720
1770 LOCATE 9,26: INPUT; "",VLUEx$: LET VLUEx%=VAL(VLUEx$): IF (VLUEx%<1) OR (VLUEx%>=66-TMG) OR (VLUEx%>64) THEN BEEP: GOTO 1770 ELSE LET BMG=VLUEx$: LET NL=66-(TMG+BMG): GOTO 1700
1790 RETURN
1800 LET LNE=1: LOCATE 17,52: PRINT SPACE$(29);SPACE$(LEN(TIT$)); LOCATE 17,1: INPUT; "Enter TITLE for bibliography (hit RETURN for none):",TIT$
1810 IF TIT$="" THEN GOTO 1850
1820 IF LEN(TIT$)>76 THEN BEEP: LOCATE 25,1: COLOR 0,7: PRINT "Title must be less than 77 characters long!"; COLOR 7,0: GOTO 1800
1830 LET SNG$(1)=CHR$(27)+CHR$(69)+SPACE$(40-LMG-INT(LEN(TIT$)/2))+TIT$
1835 LET SNG$(2)=CHR$(27)+CHR$(70): LET LNE=6
1840 FOR J=3 TO 5: LET SNG$(J)=" ": NEXT J
1850 RETURN
1860 LET XPL=CSRLIN: LOCATE 25,1: PRINT SPACE$(79); LOCATE 25,1: COLOR 0,7: PRINT "Hit F2 to STOP "; COLOR 7,0: KEY(2) ON: LOCATE XPL,1: RETURN
2000 CLS: PRINT: INPUT "Enter name of output file";OPF$: IF OPF$="" THEN CLOSE: GOTO 2010
2002 PRINT #3,"last line!*?\": CLOSE: PRINT: INPUT; "Enter Disk to hold output file in Drive B and hit RETURN",DUD$
2005 OPEN "output.dsn" FOR INPUT AS #3: OPEN "B:"+OPF$ FOR APPEND AS #1
2006 LINE INPUT #3,INLN$: IF INLN$="last line!*?\" THEN GOTO 2010
2008 PRINT #1,INLN$: GOTO 2006
2010 RETURN
2100 LOCATE 13,20: FILES "b:*.bst"
2105 LOCATE 6,38: RETURN 120
```

HOUSE - 8/31/84

```
9 ON KEY(1) GOSUB 300: KEY(1) OFF
10 ON ERROR GOTO 200: LET FINM$="HOUSE": LET EFLAG=0: CLS: LOCATE 2,30: COLOR 0,7: PRINT " UTILITIES ": COLOR 7,0: LOCATE 5,1: PRINT "Options: ";SPC(5);"1 -> Delete all CATEGORIES": PRINT SPC(13);"2 -> Delete FILE"
20 PRINT SPC(13);"3 -> Rename FILE": PRINT SPC(13);"4 -> Directory of FILES": PRINT SPC(13);"5 -> EXIT"
25 LOCATE 10,1: PRINT "Choice";
30 LOCATE 10,8: PRINT SPACE$(10); LOCATE 10,7: INPUT; CHC$: LET CHC=VAL(CHC$)
40 IF (CHC<1) OR (CHC>5) THEN BEEP: LOCATE 10,20: PRINT "Input a number between 1 and 5!"; GOTO 30
50 ON CHC GOTO 60,90,120,180,190
60 CLS: LET FLE$="CAT.DAT"
65 LOCATE 5,1: INPUT "Are you sure you want to delete all the categories (enter Y or N)";ANS$: GOSUB 70
67 GOTO 65
70 IF (ANS$="Y") OR (ANS$="y") THEN KILL "B:"+FLE$+".bst": RETURN 10
80 IF (ANS$="N") OR (ANS$="n") THEN RETURN 10 ELSE BEEP: COLOR 0,7: PRINT "Enter Y or N! "; COLOR 7,0: RETURN
90 CLS: LET PFL=0
95 LOCATE 5,1: KEY(1) ON: INPUT "Which FILE do you want to delete";FLE$: KEY(1) OFF: IF (LEN(FLE$)>8) OR (INSTR(1,FLE$,".")>0) THEN BEEP: PRINT FLE$;" is not a valid FILE!";SPACE$(15): GOTO 95
100 LOCATE 9,1: PRINT "Are you sure you want to delete file ";FLE$; INPUT " (enter Y or N)";ANS$: GOSUB 70
110 GOTO 100
120 CLS: LET PFL=1: LOCATE 25,1: COLOR 0,7: PRINT " Enter DONE to terminate "; COLOR 7,0
130 LOCATE 5,1: KEY(1) ON: INPUT "Which file to rename";NA$: KEY(1) OFF
140 IF (LEN(NA$)>8) OR (INSTR(1,NA$,".")>0) THEN BEEP: PRINT NA$;" is not a valid file!";SPACE$(15): GOTO 130
145 IF (NA$="DONE") OR (NA$="done") THEN GOTO 10
150 LET PFL=2: LOCATE 8,1: KEY(1) ON: INPUT "New name";NNA$: KEY(1) OFF
160 IF (LEN(NNA$)>8) OR (INSTR(1,NNA$,".")>0) THEN BEEP: PRINT "Files cannot have an extension!"; GOTO 150
```

HOUSE - 8/31/84 (cont'd).

```
165 IF (NNA$="DONE") OR (NNA$="done") THEN GOTO 10
170 NAME "b:"+NNA$+".bst" AS "b:"+NNA$+".bst": GOTO 10
180 CLS: LOCATE 5,1: FILES "B:*.bst"
181 COLOR 0,7
182 OPEN "B:CAT.DAT" AS #1: IF LOF(1)=0 THEN CLOSE #1: LOCATE CSRLIN+2,1: BEEP:
PRINT " No categories on data disk! ": KILL "B:CAT.DAT" ELSE LOCATE CSRLIN+2,1:
CLOSE #1: PRINT " Categories exist on data disk. "
185 COLOR 7,0: LOCATE CSRLIN+3,1: INPUT "<Hit RETURN>";DUD$: GOTO 10
190 COMMON FINM$,EFLAG: CHAIN "driver": END
200 IF (ERR=64) OR (ERR=67) THEN LET MSG$="Improper Filename! Hit RETURN.": GOS
UB 250: RESUME 10
205 IF ERR=53 THEN LET MSG$="File not found! Hit RETURN.": GOSUB 250: RESUME 10

210 IF (ERR>13) AND (ERR<17) THEN LET MSG$="Input Too Long! Hit RETURN.": GOSUB
250: RESUME 10
215 IF ERR=58 THEN LET MSG$="File "+NNA$+" already exists! Hit RETURN.": GOSUB
250: RESUME 10
220 IF ERR=71 THEN LET MSG$="Insert Disk into Drive B! Hit RETURN when ready.":
GOSUB 250: RESUME 0
230 LET MSG$="Error #"+STR$(ERR)+" at "+STR$(ERR)+" ". Hit RETURN to continue."
: GOSUB 250: LET EFLAG=ERR: RESUME 190
250 LOCATE 25,1: BEEP: BEEP: COLOR 0,7: PRINT " ";MSG$;" ";: COLOR 7,0: INPUT;
"DUD$": LOCATE 25,1: PRINT SPACE$(79);: RETURN
300 LOCATE 11,1: FILES "B:*.bst"
305 IF PFL=1 THEN RETURN 130
310 IF PFL=0 THEN RETURN 95 ELSE RETURN 150
```

ALTER.UTL - 8/31/84

```
10 KEY OFF: ON ERROR GOTO 500: LET FLG=0: ON KEY(1) GOSUB 650: KEY(1) OFF
30 CLS: OPEN "Field.sz" FOR INPUT AS #1: GOSUB 150: CLOSE #1
40 GOSUB 170: GOSUB 180: GOSUB 250: GOSUB 200: GOSUB 460: GOSUB 210
99 END
100 LOCATE 5,20: COLOR 0,7: PRINT " USER MUST SUPPLY CURRENT FIELD SIZES ": COLO
R 7,0: LOCATE 7,3
105 PRINT "Maximum number of characters allowed in:": LOCATE CSRLIN+1,HOZ+7
107 PRINT SPACE$(15);: LOCATE CSRLIN,HOZ: INPUT;"Author";A$: IF A$<=0 THEN BEEP:
LOCATE CSRLIN,HOZ+7: GOTO 107 ELSE LOCATE CSRLIN+1,HOZ+7
108 PRINT SPACE$(15);: LOCATE CSRLIN,HOZ: INPUT;"Title";T$: IF T$<=0 THEN BEEP:
LOCATE CSRLIN,HOZ+7: GOTO 108 ELSE LOCATE CSRLIN+1,HOZ+8
109 PRINT SPACE$(15);: LOCATE CSRLIN,HOZ: INPUT;"Source";S$: IF S$<=0 THEN BEEP:
LOCATE CSRLIN,HOZ+8: GOTO 109 ELSE LOCATE CSRLIN+1,HOZ+9
110 PRINT SPACE$(15);: LOCATE CSRLIN,HOZ: INPUT;"Abstract";B$: IF B$<=0 THEN BEE
P: LOCATE CSRLIN,HOZ+9: GOTO 110 ELSE LOCATE CSRLIN+2,HOZ
111 LET E$=9+A$+T$+S$+B$: RETURN
150 INPUT #1,A$: INPUT #1,T$: INPUT #1,S$: INPUT #1,B$: INPUT #1,E$
155 LOCATE 5,1: COLOR 0,7: PRINT " CURRENT MAXIMUM FIELD SIZES ": COLOR 7,0: LOC
ATE 9,1
160 PRINT "Author: ";A$: PRINT "Title: ";T$: PRINT "Source: ";S$: PRINT "Abstrac
t: ";B$: PRINT "Maximum entry (record) size: ";E$
162 PRINT: INPUT;"Is this correct (N for No)";ANS$: IF (ANS$="n") OR (ANS$="N")
THEN LET HOZ=8: CLS: GOSUB 100: CLS: GOTO 155 ELSE LOCATE CSRLIN,1: PRINT SPACE$
(30): RETURN
170 LET A2$=A$: LET T2$=T$: LET S2$=S$: LET B2$=B$: LET E2$=E$: LET HOZ=47: LOCA
TE 5,HOZ: COLOR 0,7: PRINT " NEW MAXIMUM FIELD SIZES ": COLOR 7,0: LOCATE 9,HOZ
: GOSUB 107
172 PRINT "Maximum entry size: ";E$: LOCATE CSRLIN+2,HOZ: INPUT;"Is this correc
t (N for No)";ANS$: IF (ANS$="n") OR (ANS$="N") THEN LOCATE 9,HOZ: GOSUB 107: GO
TO 172 ELSE LOCATE CSRLIN,HOZ: PRINT SPACE$(30): RETURN
180 CLS: LOCATE 2,30: COLOR 0,7: PRINT " FILES TO BE CHANGED ": COLOR 7,0: PRINT

181 PRINT "Enter Names of ": COLOR 0,7: PRINT "ALL";: COLOR 7,0: PRINT " Data F
iles. Files not entered will not be converted": PRINT "and cannot be use
d with this package."
182 PRINT "Enter DISK to convert files on another data disk. Hit RETUR
N alone when done."
```

ALTER.UTL - 8/31/84 (cont'd).

```

184 PRINT: LET F=0: LET T=1: DIM S$(500)
185 LOCATE 9,1: KEY(1) ON: PRINT "File";SPACE$(70);: LOCATE 9,5: INPUT; "";$$(T)
: KEY(1) OFF: IF S$(T)<>"" THEN GOSUB 400: T=T+1: GOTO 185
186 LET T=T-1: RETURN
200 CLS: LOCATE 7,1: PRINT "Working on file: ": DIM BF$(200): LET CT=1
202 FOR J = 1 TO T: LOCATE 7,18: PRINT SPACE$(55): LOCATE 7,18
203 IF S$(J)="DISK" THEN LOCATE 25,1: COLOR 0,7: PRINT " Enter other disk with f
ile ";S$(J+1);" and hit RETURN ";: COLOR 7,0: INPUT;"";DUM$: LOCATE 25,1: PRINT
SPACE$(70);: LOCATE 7,18: GOTO 206
204 PRINT S$(J);: GOSUB 300
206 NEXT J
207 RETURN
210 IF FLG<>1 THEN KILL "field.sz"
211 CLOSE: OPEN "field.sz" FOR OUTPUT AS #1: PRINT #1,A%: PRINT #1,T%: PRINT #1,
S%: PRINT #1,B%: PRINT #1,E%: CLOSE
212 LET EST$=STR$(E%): OPEN "hardisk.bat" FOR OUTPUT AS #1: PRINT #1,"c:": PRINT
#1,"cd \": PRINT #1,"assign b=c": PRINT #1,"cd \bibdat": PRINT #1,"a:": PRINT #
1,"abasic driver /s:"+EST$: CLOSE
213 OPEN "autoexec.bat" FOR OUTPUT AS #1: PRINT #1,"BASICA DRIVER /S:"+EST$: CLD
SE
220 LOCATE 15,28: COLOR 0,7: PRINT " Done with Conversion ": COLOR 7,0: RETURN
250 CLS: LOCATE 11,1: INPUT "Do you want to use continuous mode (Y for YES)";CNT
$: RETURN
300 OPEN "b:"+S$(J)+".bst" FOR INPUT AS #1: CLOSE
310 OPEN "b:"+S$(J)+".bst" AS #1 LEN=E2%: FIELD 1,2 AS C$,2 AS Y$,5 AS S$,A2% AS
A$,T2% AS T$,S2% AS U$,B2% AS B$
311 GET #1: IF (C$<>"^") OR (MID$(T$,1,6)<>"~!p2)") THEN BEEP: PRINT " No
t a Data File!";: LET UPF=500: GOSUB 600: LET BF$(CT)=S$(J): LET CT=CT+1: CLOSE:
RETURN
312 GOSUB 452: OPEN "DISK.ut1" AS #2 LEN=E%: FIELD 2,2 AS C2$,2 AS Y2$,5 AS S2$,
A% AS A2$, T% AS T2$,S% AS U2$,B% AS B2$: LET CQ=0
313 LSET C2$=C$: LSET Y2$=Y$: LSET S2$=S$: LSET A2$=A$: LSET T2$=T$: LSET U2$=U$
: LSET B2$=B$: PUT #2: IF (ASC(C$)=0) AND (ASC(T$)=0) THEN LET CQ=CQ-1: GOTO 320
314 GET #1: LET CQ=CQ+1: GOTO 313
320 PRINT " ";CQ;" entries converted.";: CLOSE #1: KILL "b:"+S$(J)+".bst":
GOSUB 350
322 RETURN
350 OPEN "b:"+S$(J)+".bst" AS #1 LEN=E%: FIELD 1,2 AS C3$,2 AS Y3$,5 AS S3$,A% A
S A3$, T% AS T3$,S% AS U3$,B% AS B3$: GET #2,1
355 LSET C3$=C2$: LSET Y3$=Y2$: LSET S3$=S2$: LSET A3$=A2$: LSET T3$=T2$: LSET U
3$=U2$: LSET B3$=B2$: PUT #1: IF (ASC(C2$)<>0) OR (ASC(T2$)<>0) THEN GET #2: GOT
O 355
360 CLOSE: RETURN
400 IF (S$(T)="DISK") OR (S$(T)="disk") THEN LET S$(T)="DISK": LET F=T: PRINT: R
ETURN
405 FOR JJ= F+1 TO T-1
406 IF (S$(JJ)=S$(T)) THEN BEEP: PRINT " File already entered!": LET UPF=300:
GOSUB 600: RETURN 185
407 NEXT JJ: RETURN
452 OPEN "disk.ut1" FOR INPUT AS #3: CLOSE #3: KILL "disk.ut1"
453 RETURN
460 IF CT=1 THEN RETURN ELSE CLS: LOCATE 3,32: COLOR 0,7: PRINT " Bad Files ": C
OLOR 7,0: PRINT
462 FOR KK=1 TO CT-1 STEP 3
463 PRINT " ";BF$(KK)," ";BF$(KK+1)," ";BF$(KK+2)
464 NEXT KK
465 RETURN
500 IF (ERR=53) AND (ERL=30) THEN LET FLG=1: LET HOZ=8: GOSUB 100: CLS: GOSUB 15
5: RESUME 40
502 IF (ERR<>53) OR (ERL<>300) THEN GOTO 507
503 BEEP: IF (CNT$="Y") OR (CNT$="y") THEN PRINT " File not found on disk.":
LET UPF=500: GOSUB 600: GOTO 505
504 LET HLD=POS(0): INPUT;" File not found on disk. Retry (Y for YES)";ANS$:
IF (ANS$="Y") OR (ANS$="y") THEN LOCATE CSRLIN,HLD: PRINT SPACE$(80-HLD);: LOCAT
E CSRLIN,HLD: RESUME 300
505 LET BF$(CT)=S$(J): LET CT=CT+1: RESUME 322
507 IF (ERR=53) AND (ERL=452) THEN RESUME 453
510 PRINT ERL;" ";ERR: STOP
600 FOR TM=1 TO UPF: NEXT TM: RETURN
650 LOCATE 11,20: FILES "B:*.bst": RETURN 185

```

END

FILMED

9-85

DTIC